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SPECIAL ART

Reports of Additional Cases of Laboratory Infection of Tularaemia in Man

Studies on Benzol Poisoning as an Industrial Hazard

I. The Chemistry and Industrial Uses of Benzol

II. Review of Cases of Acute Benzol Poisoning

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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

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PUBLIC HEALTH REPORTS

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SIX ADDITIONAL CASES OF LABORATORY INFECTION OF TULARÆMIA IN MAN[1]

By R. R. PARKER, Special Expert, and R. R. SPENCER, Surgeon, United States Public Health Service

Six cases of tularæmia have occurred among the personnel of the Rocky Mountain Spotted Fever and Tularæmia Laboratory of the United States Public Health Service located at Hamilton, Mont. The first two became ill July 4, 1924, the third October 2, 1924, and the fourth, fifth, and sixth on May 18, 19, and 20, 1925, respectively.

Only two members of the laboratory personnel actually engaged in performing or assisting at necropsy of guinea pigs and rabbits infected with tularæmia or engaged in holding these animals or in handling ticks infected with tularæmia have escaped infection.

The 6 cases at Hamilton, Mont., increase to 17 the total number of cases of tularæmia in laboratory workers. Of the earlier cases 2 occurred in the plague laboratory of the United States Public Health Service in San Francisco,[2, 3] 6 in the Hygienic Laboratory of the United States Public Health Service in Washington, D. C.,[4] and 3 in the Lister Institute of Preventive Medicine, London, England.[5]

In all 17 cases the infection gained entrance to the body without leaving the slightest evidence of a local lesion or without causing glandular enlargement of any consequence. The clinical picture was more like that of typhoid fever than of any other infection, thus characterizing this uniform series of 17 cases of tularæmia as being of the typhoid type of disease, as defined by Francis.[3]

CASE I

R. R. S., male, age 36, physician in charge of the Rocky Mountain Spotted Fever and Tularæmia Laboratory, Hamilton, Mont.

Onset.—July 4, 1924, patient became ill with a feeling of general malaise, weakness, and indefinite pains in the abdomen. The next two days were marked by weakness and constipation, and a temper-

[1] From the Rocky Mountain Spotted Fever and Tularæmia Laboratory of the United States Public Health Service, Hamilton, Mont.

[2] McCoy, G. W., and Chapin, C. W.: *Bacterium tularense*, the cause of a plaguelike disease of rodents. Pub. Health Bull. 53, United States Public Health Service, January, 1912.

[3] Francis, Edward: Tularæmia, J. A. M. A., Apr. 25, 1925, vol. 84, p. 1247.

[4] Lake, G. C., and Francis, Edward: Six cases of tularæmia occurring in laboratory workers. Pub. Health Rep., vol. 37, pp. 392-413 (Feb. 24), 1922. Reprinted in Bull. 130, Hyg. Lab., United States Public Health Service, March, 1922.

[5] Ledingham, J. C. G., and Fraser, F. E.: Tularæmia in man from laboratory infection. Quart. J. Med., July, 1924, pp. 365-382.

pation and increasing weakness characterized the febrile period, which continued for 34 days.

Skin eruption.—The period October 10 to 25 was also marked by a skin eruption which appeared first behind the ears and, spreading, took the form of a band about 3 inches wide across the back of the neck. The eruption gradually extended to the face, sides of neck and forehead, on October 18, it was noted on the elbows, and it finally appeared on the backs of the hands, on wrists, and fingers, and, to a slight degree, on the forearms and arms The eruption consisted of red, raised papules, mostly about one-fourth inch in diameter, a few were larger. The skin peeled on the areas of eruption and scaling reached its height about November 6.

Agglutination.—The agglutination titers of the blood serum for *Bacterium tularense* at various times following the onset of illness were: 6 days, 0; 14 days, 640, 21 days, 1,280, 7 months, 320; 9 months, 160; 15 months, 160. As in Case 1 a relapse (June 12 to 20, 1925) did not result in a rise of the agglutination titer, which on May 16 was 320 and on July 1 was 160.

Half time was spent at work November 22 to December 15; and after the latter date full-time work was done with difficulty owing to weakness and nervousness.

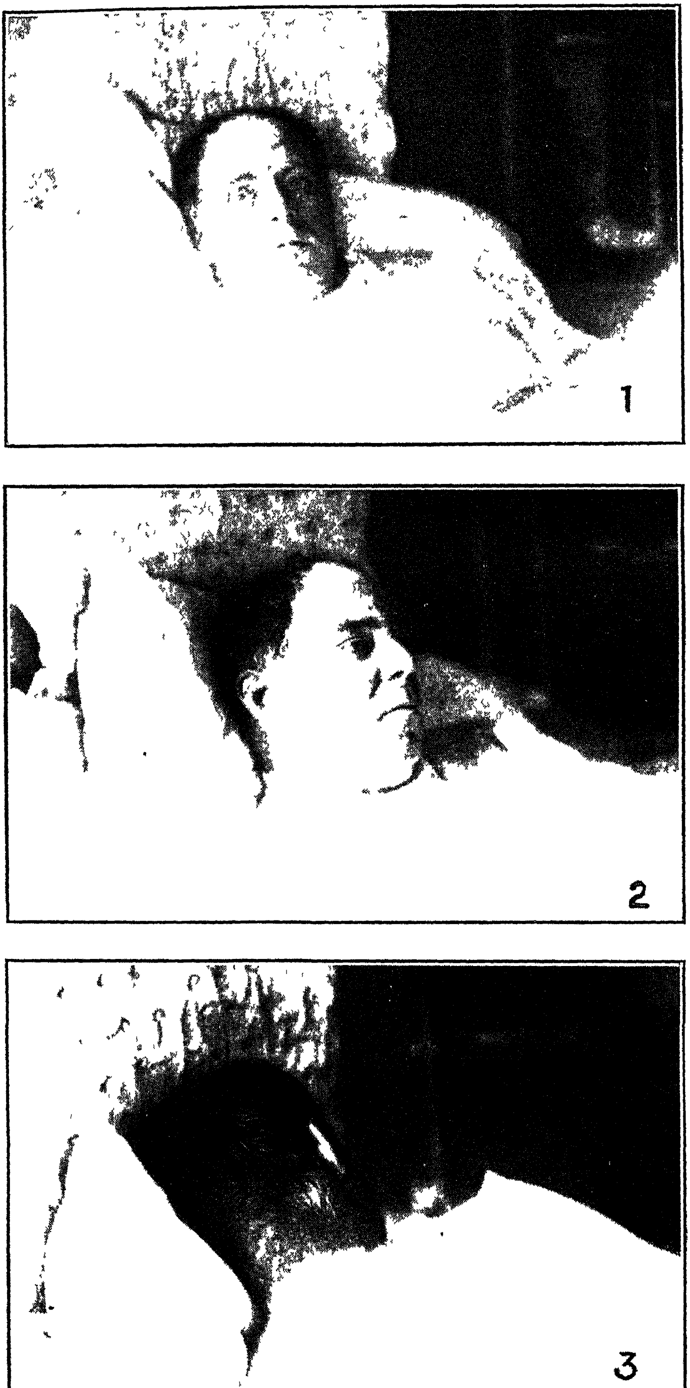
Relapse.—May 20 to 23, 1925, the patient experienced chilly sensations, general weakness, and slight headache, but no fever. Though there was increasing weakness he continued work until June 12, on which date (due probably to overexertion incident to a seven-day inspection and collecting trip in eastern Montana) a febrile attack began which lasted eight days and was accompanied by chilly sensations, headache, weakness, muscular pains, tenderness of the eyeballs, soreness of throat, and constipation; and for two days there was a scattered eruption of general distribution and exactly like that which accompanied the initial illness.

Temperature.—(See temperature chart.)

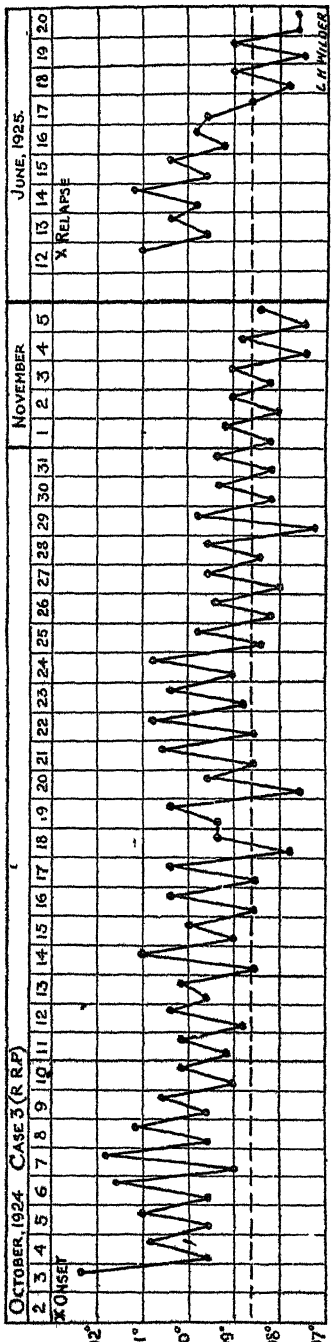
CASE 4.

E. W. M., male, age 33, laboratory assistant in the Rocky Mountain Spotted Fever and Tularæmia Laboratory at Hamilton, Mont.

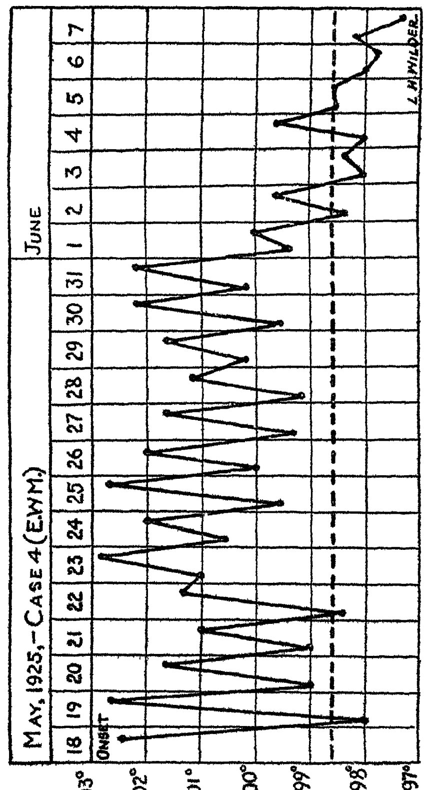
Onset.—May 18, 1925, at 9 a. m., became suddenly ill in the laboratory, with chill, headache, backache, and dizziness. Temperature was 100.4° F. at 11 a. m., when he was sent home. At 2 p. m. his condition was markedly aggravated He had fogged vision and deafness and did not respond when addressed unless roused by shaking. He was immediately taken to the local hospital and had to be assisted. In the right anterior cervical region there was much tenderness and slight swelling. There was a slight involvement of the



Skin eruption in tularaemia, Case 3 Photographs taken October 23, 1924



Temperature chart, Case 3



Temperature chart, Case 4

right tonsil. In the evening severe backache and shooting pains in the muscles of the legs made the patient very uncomfortable.

May 19, in the morning, owing to a return to normal temperature and an almost complete remission of symptoms, the patient left the hospital and returned home During the day there was headache, chilliness, cough, and sore throat, followed at night by a severe chill, fever, and sweating. Patient was up and about most of the day.

Owing to an almost normal temperature May 20 the patient was up and drove his car to the laboratory but did not perform any work. He complained of sore throat, coughed, and was chilly.

May 21: Throat very sore, had a chill; was up and about the house.

May 22: Throat and neck very sore, chilly; perspired freely at night.

From May 23 until temperature returned to normal the patient remained in bed.

Sore throat and soreness of the nasal passages were prominent symptoms throughout the illness. For several days the patient was unable to breathe through the nose; the passages were so tender that it could not be blown. The teeth were sore Constipation was marked during the entire illness. Nosebleed was noted five times. Deafness was noted while confined to bed Blurred vision was present from onset until several days after temperature became normal Abdominal pain was not marked and was confined to left side.

An eruption, like that of Case 3, appeared May 28 on the back of the neck and forehead and extended to the front of the neck, hands, and right knee. A few spots appeared on the arms and forearms. Small pustules appeared on the back and arms.

The patient returned to work July 5 and performed full-time duty, although with difficulty. Afternoon and evening rises in temperature occurred at intervals for several weeks. On June 30 a note was made that the spleen was palpable. Work has been continuous to the time of this report, but effects of the illness were still apparent in November, 1925.

Agglutination.—The agglutination titers of the blood serum for *Bacterium tularense* on various days following the onset of illness were as follows: 5 days, 0; 11 days, 160; 18 days, 320; 25 days, 1,280, 71 days, 320; 87 days, 320.

Temperature.—(See temperature chart.)

CASE 5

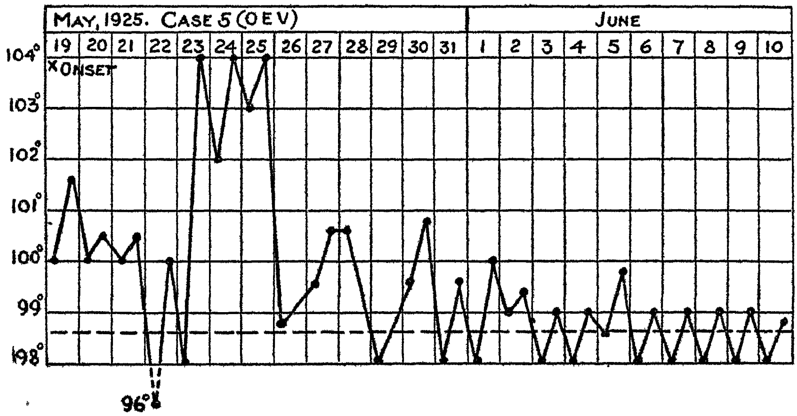
O. E. V., male, age 34, laboratory attendant in the Rocky Mountain Spotted Fever and Tularæmia Laboratory at Hamilton, Mont.

Onset.—May 19, 1925, the patient was feeling ill when he came to work and was noticeably sick at 11 a. m., but he continued to work until evening, when he took to bed. The onset was accompanied by

headache, pain in the eyes, pain in the back, abdominal pains, shifting pains in the muscles, chilly sensation, and fever. The patient remained in bed during his illness except that on the fourth day (May 22) there was an amelioration of symptoms and a remission of temperature to 96° in the morning, going to 100° in the afternoon, and the patient was up and about the house in the afternoon May 23 the temperature in the morning was 98° but reached 104° in the evening and reached 104° on the two following days.

The throat was sore during the first few days, but there was no cough. During the febrile period the chief complaint was of pain in the left side of the chest and back. At times it was painful to take a full breath. Sweating occurred during the night and after sleeping. Coldness of the feet was continual.

The patient did not return to work in the laboratory; he began work elsewhere on July 1, but it was not until September that he felt normal.



Temperature chart, Case 5

Agglutination.—The agglutination titers of the blood serum for *Bacterium tularense* on various days following the onset were: 4 days, 0, 10 days, 10; 22 days, 160; 31 days, 160; 63 days, 160.

Temperature.—(See temperature chart.)

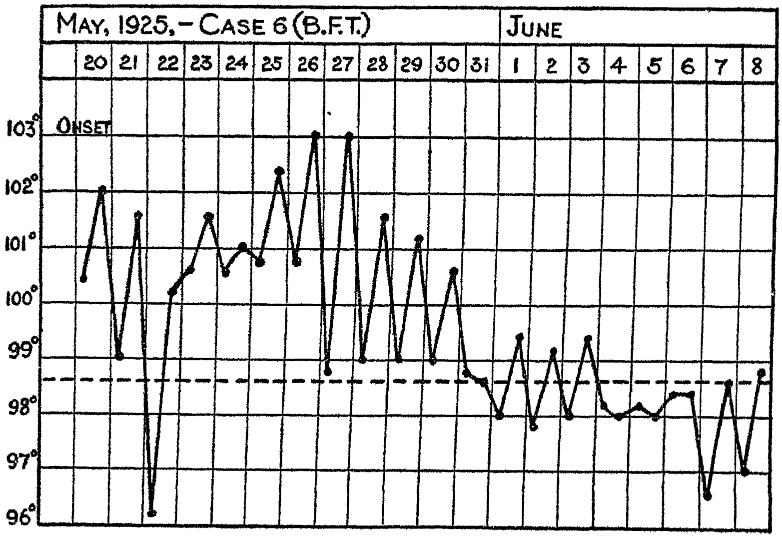
CASE 6

B F T., male, age 30, laboratory attendant in the Rocky Mountain Spotted Fever and Tularæmia Laboratory at Hamilton, Mont.

Onset.—May 20, 1925, although feeling weak and "stretchy," since the previous evening, went to work with a temperature of 100.4°, but went home at noon feeling very weak and complaining of stiff joints, sore muscles, stiff neck, and pain on taking a deep breath, had a chill, fever, and profuse sweating, his temperature reaching 102° in the evening.

His illness was marked by weakness, aching of the eyeballs, blurred vision, pains in the teeth, backache, soreness of the abdomen, "stretchy" feelings, chilliness, nosebleed twice on the sixth day, and coughing which began on the seventh day and continued throughout the eighth day There was no sore throat such as characterized the illness of E. W M.

The fall in temperature noted on the chart (May 22) was accompanied by a relaxation of symptoms to such an extent that the patient went to work on that date, sure that his illness was ended. He found, however, that work tired him so much that he returned home, went to bed, and remained until recovery He resumed full time work July 1, and by August 15 was feeling normal.



Temperature chart, Case 6

Agglutination.—The agglutination titers of the blood serum for *Bacterium tularense* on various days following the onset were: 3 days, 0, 9 days, 80; 16 days, 1,280. 23 days, 320; and 42 days, 320.

Temperature.—(See temperature chart.)

SUMMARY OF SYMPTOMS

(1) *Employment*—Our six cases comprised all but two of the total personnel of the laboratory actually engaged in performing or assisting at necropsies of guinea pigs and rabbits infected with tularæmia or engaged in holding infected animals or employed in handling ticks infected with tularæmia.

(2) *Onset.*—A sudden onset of rather high fever characterized the beginning of illness which, in most of the cases, occurred while the patients were at work.

(3) All six cases manifested the typhoid type of symptoms.

(4) *Remission of temperature.*—Cases 4, 5, and 6 illustrate the rule that, following the initial high temperature of one, two, or three days' duration there is a remission of temperature lasting for one, two, or three days, followed by a secondary rise to high temperature. This remission is accompanied by an amelioration of symptoms which reflects itself in the conduct of the patient and in the physician's opinion that the case is merely one of some ephemeral fever Of our patients, for example, Case 4 left the hospital and was up and about for several days; Case 5 was up and dressed; and Case 6 attempted to return to work

Cases 1 and 2 are without temperature records for the first few days, which probably finds its explanation in the same remittance of fever and temporary abeyance of symptoms. Case 3 showed a remission of temperature on the third day.

(5) *Absence of local lesions or glandular enlargement*—There was no local ulcer or sore or evidence of tick bite, nor was there evident enlargement of any lymph glands

(6) *Duration of fever.*—The febrile periods ended between the fourteenth and twenty-fourth days, except that in Case 3 it was 34 days.

(7) *Diagnosis*—Agglutination of *Bacterium tularense* by the patient's blood serum was negative in tests made during the first week as follows. On the third day in Case 6; on the fourth day in Case 5; on the fifth day in Case 4; and on the sixth day in Case 3. All cases gave positive agglutination in the second week and in all subsequent tests.

(8) *Eruption.*—Case 3 had a very definite skin eruption which appeared on the eighth day and continued until the twenty-third day. The eruption consisted of red, raised papules and was followed by peeling and scaling. A similar but less extensive eruption occurred in Case 4.

(9) *Tonsillitis.*—Case 2 was at first tentatively diagnosed as tonsillitis. Case 4 had a very sore throat throughout his illness, with slight involvement of the right tonsil, the nasal passages were also involved.

(10) *Convalescence.*—Convalescence was marked by weakness and a tendency to tire readily on exertion. Return to normal weight was slow.

(11) *Relapses.*—Cases 1 and 3, after 10 months and 8 months, respectively, had relapses of fever lasting six and eight days, respectively. These relapses in each instance followed unusual excessive exertion on the part of the patients while on trips away from home.

CONTACT OF OUR CASES WITH TULARÆMIA

Continuous experimental studies on tularæmia have been in progress at the Hamilton laboratory since the early spring of 1923, following the finding of natural infection in ticks.

Cases 1 and 3 were on the station staff at the inception of these studies; onset of tularæmia occurred, respectively, on July 4 and October 2 of the following year, 1924. Both performed numerous autopsies in the routine way on guinea pigs and rabbits dead of tularæmia and transferred the infection by inoculation or vaccination to healthy animals. In addition, Case 3 handled many infected ticks.

Case 2 was employed beginning February 27, 1924 The onset of his illness was July 4, 1924 He performed autopsies and assisted in the transfer of infection from infected to healthy animals

Case 4 was employed beginning May 24, 1924, onset of infection was May 18, 1925 He was continuously engaged in tick rearing operations and handled, during rearing, all ticks experimentally infected with tularæmia as well as the infected animals on which they fed. The use of rubber gloves for this work was impractical and contamination of the hands with animal urine and tick feces was unavoidable

Cases 5 and 6 began work, respectively, on April 20 and March 15, 1925, and the onset of their illness was, respectively, May 19 and May 20, 1925. Except that Case 6 occasionally held guinea pigs and rabbits for vaccination, these attendants were sedulously kept from contact with tularæmia work.

All cases were exposed at various times to such danger of infection as may have attended the handling of numerous wild ticks that were brought in or sent to the laboratory for various purposes. Tularæmia infection has frequently been found in such ticks.

POSSIBLE SOURCES OF INFECTION

The following possible means of laboratory infection were recognized and guarded against: (1) Contamination of the skin; (2) the getting of infectious material into the eyes; (3) contamination of the mouth or the ingestion of infected material; and (4) tick bite. Although not recognized as a definite source of danger, bites of infected animals were carefully avoided.

Materials known to be sources of contamination were: Tissues of infected animals; nasal secretions and urine of rabbits, tissue of infected ticks (especially the body fluid); tick excreta.

PRECAUTIONS TAKEN

Throughout the tularæmia work every possible precaution has been taken to guard against human infection.

For the most part, rubber gloves were worn when making autopsies or transfers of infection; their use by assistants was invariable. Assistants holding animals wore heavy rubber or leather gloves. During the infesting of rabbits and guinea pigs with ticks, and their

subsequent removal, the use of gloves by the person handling the ticks was not feasible This work was always performed by one of the writers when known infected ticks were used On all occasions when tularæmia-infected animal tissue or ticks were handled, thorough and immediate cleansing and disinfecting of the hands was rigidly insisted upon, whether or not gloves had been used. All abrasions were treated with iodine. All ticks, whether of known infected history or not, were handled solely with forceps Instruments were kept thoroughly disinfected and the boards used for autopsies were constantly kept in a barrel of cresol solution Tables used for autopsies and for the infesting of animals with ticks and for the removal of ticks were cleansed and washed with disinfectants immediately following use During the removal of ticks the table was frequently washed several times on account of the unavoidable scattering of tick excreta.

The writers were acutely conscious of the danger of infection and repeatedly impressed this danger on their assistants.

These laboratory infections, then, occurred in spite of unusual care and in face of the fact that each person was fully warned and acutely conscious of the risk.

Except Case 4, who reared ticks, assistants rarely performed any operation with tularæmia-infected animals or ticks except when assisting one of the writers.

MODE OF INFECTION

The portal of entry of *Bacterium tularense* in these cases is unknown, there being no evidence in any of them to indicate the primary seat of infection There was no local ulcer or sore, nor was there evident enlargement of the lymph glands.

Cases 1, 2, and 3 became ill while performing routine procedure—autopsies and transfers of infection from infected to healthy animals. Tick excreta and tick tissue can be excluded as causal factors in Cases 1, 2, and 3, since none of them had handled ticks for some time prior to the infection. Tick bites are also excluded. In all three the source of infectious material was undoubtedly an infected animal, but there is no evidence of the means by which infection was transferred, nor of the point of entry.

The circumstances which attended the infection of Cases 4, 5, and 6, however, were quite different from those of the 14 cases of laboratory infection which had preceded them None of them performed necropsy on infected animals As previously stated, Cases 5 and 6 had been carefully kept from any direct contact with tularæmia work except that Case 6 occasionally held animals while they were vaccinated. While the duties of Case 4 frequently necessitated the manipulation of known infected ticks (experimentally infected in the

laboratory), he had handled none later than the middle of March, two months previous to the date of infection

It is believed that the direct or indirect source of infection for Cases 4, 5, and 6 was a lot of several hundred ticks collected at our request from Owl Canyon, in the Bridger Mountains near Bozeman, Mont., by Prof. R A. Cooley These ticks, though subsequently found to be heavily infected with tularæmia, were supposed to be free from all infections, since no tick-borne disease had ever been reported within a radius of many miles of the point of collection. Supposed freedom from infection and a great abundance of ticks have made this canyon for many years a favorite place for the collecting of ticks for experimental purposes For the very reason that no infection was suspected, these ticks were turned over to the men concerned (Cases 4, 5, and 6) for customary procedure for the engorging of females This procedure is briefly described

1 *Infestation of hosts.*—The ticks were received in pill boxes, which were placed on an island in a pan of water and the ticks were transferred by forceps, without handling, to small stoppered vials From each vial they were transferred in a tangled mass to a shaved area on the belly of a guinea pig or rabbit and immediately covered by a brass gauze capsule which was secured to the animal by adhesive tape.

On May 5, one Belgian rabbit was infested, on May 6 two more were infested, and on May 8, seven guinea pigs. A total of 160 ticks were used, 12 to 23 being placed on an animal.

2. *Removal of ticks.*—The ticks were not removed until engorgement of the females was complete or unless a host animal died before this had been accomplished In the latter case the ticks were transferred to a new host. Ten days is the usual period required for full engorgement. The removal was performed, while sitting, by two persons working across a narrow table One held the animal on its back, grasping the front legs in one hand and the hind legs in the other, the animal being raised from and lowered to the table as necessary for the removal of the adhesive bindings. The second person first removed the tape and then carefully detached the ticks with forceps. The males were placed in a vial to be destroyed and the females in separate pill boxes for egg deposition. The ticks were not touched with the hands. The person holding the animal wore heavy rubber gloves. The person removing the bandages and ticks used the hands uncovered.

Partly fed ticks were transferred from dead guinea pigs to normal animals on May 10, 11, 13, 15, and 16. Engorged females were recovered from one Belgian rabbit on May 15 and another on May 16.

The original infestation of the host animals was performed by Cases 4 and 6 Following this and until May 16, all removals of ticks and transfers to new hosts were made by one of the writers, with the assistance of one of those two men. On May 16, however, the engorged females were removed from the second Belgian rabbit by Cases 4 and 5, the first and only time that Case 5 is known to

have come in contact with these ticks and animals, or with any source of infection The rabbit was held by Case 5 and the adhesive strappings and ticks were removed by Case 4. The entire procedure was performed under the observation of one of the writers.

During the removal of the tape the rabbit began a loud and prolonged squealing which continued until the removal was completed and lasted fully one minute Case 6, attracted by the squealing, came and leaned over the table and the rabbit to observe the cause of the disturbance. While squealing, the rabbit also passed urine, some of which was spattered on the face of Case 5, who was unable to release his hold of the rabbit His face, however, was immediately washed with cotton soaked in cresol solution and the urine was similarly removed from the table As soon as this rabbit could be released Case 5 thoroughly cleansed his face with soap and water.

During the period of the above-described operation, tularæmia infection in these ticks and animals was not suspected All seven guinea pigs infested on May 8 died between the 10th and 16th, and the ticks were transferred as indicated above. The lesions in the dead guinea pigs were not diagnostic, however, they were sufficiently unusual to justify transfers from three of them being made by spleen emulsion to normal animals. Of the latter, one died of typical tularæmia on May 18, and further transfers from the other two caused death typically on May 30. All three Belgian rabbits also died with typical lesions of spleen and liver and also complete involvement of the lungs. The lungs of one of the guinea pigs were also affected.

It is likely that the putting of these ticks on their hosts was an operation devoid of risk, because the ticks were hibernated, unfed adults (hibernated ticks do not pass excreta until fed), and the animals were normal. Obvious danger, however, attended the transfer of the partially fed ticks from the dead guinea pigs and the removal of the engorged females.

So far as is known this is a complete record of the contact of Cases 4, 5, and 6 with tularæmia-infected ticks and animals for a period of nearly two weeks preceding onset. These cases, therefore, appear to center around the procedure attending the feeding of the Bozeman ticks. Case 4 was most often exposed, and Case 5 on May 16 only. As previously stated, except when the ticks were first placed on their hosts and on May 16, when the females were removed from one of the Belgian rabbits, one of the writers performed the more dangerous procedure of transferring and removing the ticks, Case 4 or Case 6 holding the animals.

The obvious sources of danger were the nasal secretions and urine of rabbits, the excreta of the ticks, and the possibility of contamination with the body fluid of an injured tick. While admitting these

possibilities they do not seem adequate to explain these cases Case 5 was the only one to come in contact with rabbit urine Contamination with nasal secretions seems improbable, except perhaps as noted below

No tick is known to have been injured. Tick excreta was undoubtedly a highly potent source of danger, as this was present in abundance on each animal and always became more or less scattered when removing the tape and brass gauze capsule.

Another source of danger is to be mentioned in explanation of the possible method of infection in this special group of cases—i. e, inhalation or droplet infection This explanation assumes that these men inhaled the infection from the air around the Belgian rabbit from which the engorged females were removed on May 16, the air having become laden with infection expelled by this rabbit during prolonged squealing as noted above. In support of this view the following points are noted: (1) The fact that all three cases became ill within a 48-hour period, May 18 to 20, is suggestive of an unsuspected means of transfer of infection; for it scarcely seems probable that the routine safeguards against recognized dangers could have failed so utterly for three men on three different occasions within such a short space of time (2) Cases 4 and 5 were seated at a narrow table with the rabbit between them and were consequently in such close proximity to the rabbit that any danger of infection in the manner suggested was aggravated (3) Case 6, attracted by the unusually long and loud squealing came and leaned directly over the rabbit. (4) This is the only known instance in which these three cases were simultaneously exposed to the danger of infection, and their onsets were sufficiently close to admit the likelihood of a common source of infection and time of exposure. (5) The periods of incubation are not opposed to the occurrence of infection on May 16, the date the rabbit was handled. (6) Case 4, owing to his removing the adhesive strappings, was closest to the rabbit during the squealing; he was the first to become sick and was also the most ill. Case 6 was in less close proximity than either Case 4 or Case 5, and for a shorter time; he was the last to become sick and was also the least ill. (7) The rabbit died May 24, which was seven days following tick removal on May 16; necropsy revealed a general and marked involvement of the lungs. (8) During the prolonged and forceful squealing, infectious material from lungs or nose may have been expelled into the adjacent air.

The suggestion that Cases 4, 5, and 6 may have contracted tularæmia by inhalation necessarily assumes that a rabbit which had sufficient pulmonary involvement when handled May 16 to give off droplet infection would live until May 23.

Acknowledgment.—We are indebted to Drs H. D. Browning, Herbert Haywood, and G. A. Gordon of Hamilton, Mont., for clinical notes made while in attendance on these cases. The agglutination tests were made by Surg. Edward Francis at the Hygienic Laboratory, United States Public Health Service, Washington, D. C.

A CASE OF TULARÆMIA IN A LABORATORY WORKER

By Louis V. Dieter, Bacteriologist, United States Public Health Service

A case of tularæmia occurring in one of the personnel of the plague laboratory of the United States Public Health Service at Los Angeles, Calif., had its onset about January 4, 1926.

This is the eighteenth case reported of laboratory infection of tularaemia in man, the previous cases having been reported from laboratories located at San Francisco, Calif. (1) (2), Washington, D. C., (3) London, England, (4) and Hamilton, Mont. (5).

The patient had been working continuously since March 31, 1925, with strains of *Bacterium tularense* isolated by him from wild rats (6) received in the laboratory for routine examination for plague; he had performed numerous necropsies of rats and guinea pigs infected with these strains.

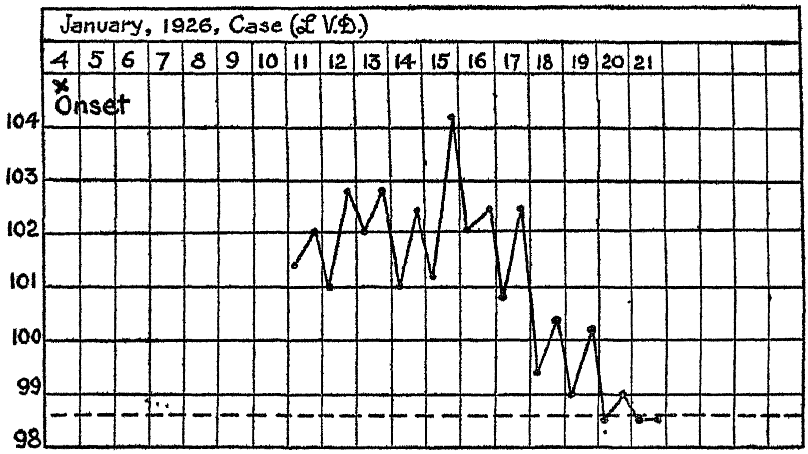
The patient (L. V. D.), male, age 40 years, bacteriologist in charge of the laboratory, became ill about January 4, 1926. Uncertainty exists as to the exact date of onset because the onset was not abrupt, but was manifested by a general feeling of malaise. About January 4 the patient first noticed a small papule on the back of the index finger of the left hand, near the middle of the proximal phalanx. This gradually enlarged during the next three or four days until it had the appearance of a small boil; when opened, pus escaped which showed the presence of *Staphylococcus aureus*. As tularæmia was not suspected, the pus was not injected into guinea pigs, so that it is uncertain whether or not the papule was the primary seat of the tularæmia infection.

The period January 4 to 9 was characterized by rise of temperature in the afternoons and evenings, chilly sensations, but no true chills, and a feeling of prostration and inability to obtain sufficient sleep. About January 9 the patient was forced to abandon work in the afternoons, and beginning January 12 he was forced to remain at home. From January 12 to 18 the symptoms suggested influenza and consisted of almost continuous headache, drowsiness, fever, chilliness during the day, extreme constipation throughout, and complete loss of appetite. There were occasional sharp pains in the right side of the chest and a continuous feeling of fullness and dull pain in the upper portion of the abdomen.

No glandular enlargements were noticeable at any time. Complete physical examination made by Surg H E Trimble, United States Public Health Service, failed to disclose glandular enlargements or other physical abnormalities.

The symptoms gradually subsided until, by May 1, 1926, no ill effects were noticeable except an occasional feeling of weakness lasting for a few days.

Agglutination —About 30 days after the onset, the patient tested his blood serum for agglutination of strains of *Bacterium tularense* which had been isolated from rats in his laboratory, agglutination occurred in dilution of 1·320, but not in higher dilution, and control serum reacted negatively About 50 days after onset he again tested his serum for agglutination of *Bacterium tularense* with the result that agglutination occurred in dilution of 1.1280, but not in higher



Temperature chart of case of tularæmia (L V. D) (laboratory infection)

dilution. The latter test was controlled by serums taken from two men belonging to the station personnel who were connected with outside work and who had recovered from attacks of influenza; their serums did not agglutinate in dilutions higher than 1:10

Five months after onset the patient's serum was tested at the Hygienic Laboratory, United States Public Health Service, Washington, D. C., and was found to agglutinate a strain of *Bacterium tularense* isolated from a rabbit obtained from the Washington, D. C., market, agglutination was prompt and complete in dilutions of 1:10, 20, 40, 80, 160, and 320, but not in higher dilutions.

REFERENCES

(1) McCoy, G. W., and Chapin, C. W *Bacterium tularense* the cause of a plague-like disease of rodents Pub. Health Bull. 53, U. S Public Health Service, January, 1912.

(2) Francis, Edward: Tularæmia. J A. M A , April 25, 1925, vol. 84, p. 1247.

(3) Lake, G C, and Francis, Edward Six cases of tularæmia occurring in laboratory workers Pub Health Rep, vol 37, pp 392–413, (Feb 24) 1922 Reprinted, Bull 130, Hyg Lab U S Public Health Service, March, 1922
(4) Ledingham, J. C G, and Fraser, F E Tularæmia in man from laboratory infection Quart J Med, July, 1924, pp 365–382
(5) Parker, R R, and Spencer, R R Six additional cases of laboratory infection of tularæmia in man Pub Health Rep, vol 41, No 27, pp 1341–1355, 1926.
(6) Dieter, Louis V, and Rhodes, Bernice Tularæmia in wild rats J Inf. Dis, vol 38, p 541, 1926

BENZOL POISONING AS AN INDUSTRIAL HAZARD

Review of Studies Conducted in Cooperation with the Subcommittee on Benzol of the Committee on Industrial Poisoning of the National Safety Council [1]

By LEONARD GREENBURG, Associate Sanitary Engineer, Office of Industrial Hygiene and Sanitation, United States Public Health Service

I. THE CHEMISTRY AND INDUSTRIAL USES OF BENZOL

Benzene (C_6H_6) commercially called benzol, is a colorless, limpid, highly refractive liquid having a somewhat pleasing characteristic odor It boils at 80.2° C., yielding a very inflammable vapor, which on burning produces a smoky flame. Its specific gravity is 0 899 at 0° C. It is highly insoluble in water, more soluble in alcohol, and completely miscible with ether, acetic acid, and carbon disulphide. It is an excellent solvent for rubber, gums, fats, and resins of various kinds.

This interesting and highly important substance was discovered by Michael Faraday, in 1825, in the liquid produced by the compression of the illuminating gas obtained from the distillation of certain oils by the Portable Gas Co., of Paris, France Benzol was, however, probably known to Shellenz some 40 years earlier. In 1833 benzol was prepared by Mitscherlich by the destructive distillation of benzoic acid with lime. He determined its composition, measured its vapor pressure, and named the substance "benzin" or "benzine." [2] Leibig suggested the modification of this term to benzol to indicate its oily origin. Marignac recovered benzol in 1842 from the distillation of phthalic acid with lime, and Berthelot, in 1866, by heating acetylene.

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[1] Since 1922 the Committee on Benzol (C.-E A Winslow, chairman, L Greenburg, vice chairman, W S Paine, secretary, H. Bradshaw, J. W S Brady, A C Fieldner, C. F Horan, L E. Weber, and J. M Weiss) has been conducting an extensive study of benzol poisoning as a hazard in American industry The results of the whole study will be published in a special bulletin for the National Safety Council by the National Bureau of Casualty and Surety Underwriters The review of the literature and the field studies were made by Dr J. W S Brady, Dr. J. J Batchelor, Mr J R Dexter, Dr J Newton Shirley, and the writer.

[2] The term "benzine," spelled with an "i," is now popularly applied to an entirely different substance (a mixture of C_6H_{14} and C_7H_{16}), a petroleum product

The presence of benzol in coal tar was first demonstrated by Leigh in 1842 and was confirmed by Hoffman in 1845. At that time Hoffman suggested the use of the name benzene for this substance.

In 1865 Kekulé announced the structural formula of benzene, and on this as a basis laid a foundation for the theories of aromatic compounds (1).

The earliest research on the commercial production of benzol from coal tar was that of Mansfield in 1849. In 1869 Caro Clemen and Engelhorn obtained patents on a process of recovering benzol from illuminating gas.

Illuminating gas, however, does not yield much benzol, without lowering its illuminating power, and it was only when similar processes were applied to coke-oven gas that substantial results were obtained.

In 1884 Carves obtained a patent on a process of removing benzol from coke-oven gas by a washing method The technical use of this method followed from the studies of von Hussener and later of Brunck, who set up the first plant in operation in Germany for the recovery of benzol in 1887.

Since that time the recovery of benzol from coking-plant gases has steadily extended, and now far exceeds recovery from city gas works.

The commercial uses of benzol rarely require that this substance be chemically pure. In practice, three types of benzol are used in industry, in addition to various other substances to which the name benzol is applied, although without justification from a chemical standpoint. The usual commercial products are the following:

Pure benzol—a clear colorless liquid of a charcteristic odor. B. P., 80.2° C.

Ninety per cent benzol.—So called because in the distillation of coal tar 90 per cent distills over at a temperature less than 100° C. It is composed of 80–85 per cent benzol, 13–15 per cent toluol, 2–3 per cent xylol, and sometimes contains as impurities traces of olefins, paraffins, sulphuretted hydrogen, and other substances

Fifty per cent benzol.—This substance contains 50 per cent of constituents which distill below 100° C. and 90 per cent of constituents which distill below 120° C. It is a highly mixed product, with only 40 to 50 per cent benzol, the remainder being higher homologues and impurities.

The other substances often called benzols are various toluols, xylols, and solvent naphthas.

Solvent naphtha.—This material is called solvent naphtha because it is used extensively (especially in England) for dissolving rubber. it is relatively free from benzol and consists largely of xylol, its homologues, and other unknown hydrocarbons (2).

In the production of benzol, the raw coal tar from the coke works is distilled in malleable iron distilling retorts using steam as the heating medium. Four fractions are usually recovered in this process Light oil, 1–3 per cent, medium oil, 9–13 per cent; heavy oil, 7–11 per cent; and anthracene oil, 12–18 per cent The remainder, comprising 52–60 per cent, is called retort pitch.

The light oil constitutes the basis for the manufacture of benzol. It is a liquid of sp. gr. 91–95; in color it is yellow to dark brown. Over 80 per cent of it consists of aromatic substance as follows Naphthalene, 16 per cent; benzol and its homologues, 74 per cent, phenol, 4–15 per cent; bases, 1–3 per cent; sulphur bearing substances, about 0.1 per cent; Nitrile, 0.2–0.3 per cent; acetone, cumene, indine, 1.0–1.5 per cent; Olefins, 3.5 per cent; Paraffins, 0.5–1 per cent; other unsaturated compounds, 1–1.5 per cent (3).

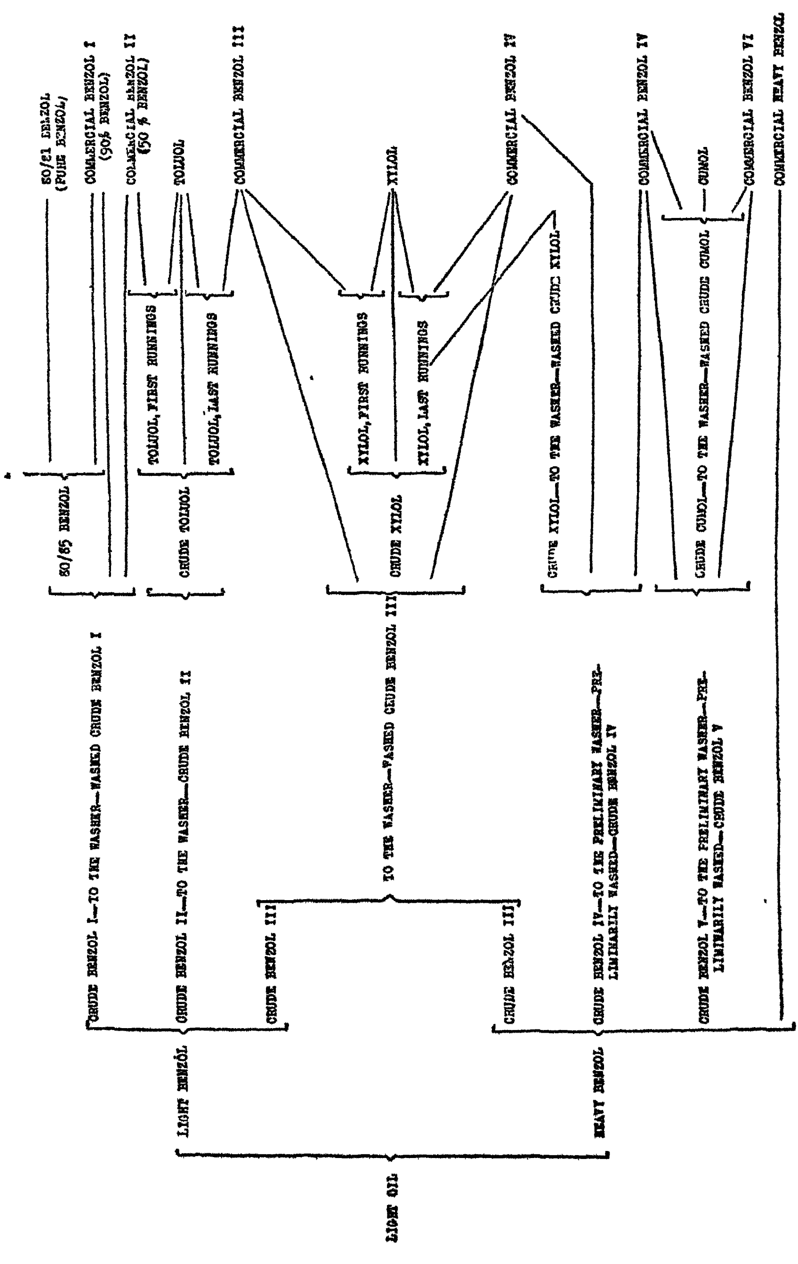
The method used for the recovery of benzol from coking-plant gases may be found in any complete handbook on industrial chemistry. The chapter by Dodge in Rogers' Industrial Chemistry has been freely drawn on in preparing the following brief summary

Essentially this process consists in removing the benzol from the coke-oven gas by taking it up in a wash oil and distilling the benzol from the wash oil by a continuous process.

The gas is cooled either by direct contact with water or in tubular coolers to about 70° F. It is then passed through a series of scrubbers (usually three). In these scrubbers, which are usually tall steel tanks or towers filled with wooden grids to present a large surface of contact, the wash oil takes up the benzol vapors After leaving the first gas scrubber the oil is passed through a heat exchanger, where it is heated by the vapors leaving the still to about 90° C., then through a second heat exchanger, where it is further heated by the debenzolized wash oil leaving the still to about 110° C.

It is then passed through the preheater and further heated by steam to 130° to 150° C. After this it passes to the still proper, which is of the continuous type, where the light oil is driven out by steam distillation, leaving the debenzolized oil, which leaves the base of the still, passes through the oil to oil-heat exchanger, the wash oil coolers, and is then ready to be pumped to the scrubbers for a second saturation with light oil from the gas

The light oil vapor mixed with steam after passing through the vapor to oil-heat exchanger is condensed and flows to the light oil tank after being separated from the condensed steam or water in the decanter. The yield of light oil from coke-oven gas is from 2¼ to 4 gallons per ton of dry coal carbonized, varying with the volatile content of the coal and much influenced by the type of oven and the heats employed. The relation of the amounts of benzol and toluol



—From K B Lehmann, Archiv f Hyg 75, 5.

produced are also influenced by the heats employed, low heats increasing the production of toluol and xylol.[3]

Prior to the World War the industrial uses of benzol grew steadily, but not sensationally. In Germany, according to Ullman (2), 100 kilograms of benzol cost 175–400 marks in 1882. By 1890 this price had been cut in half, and 4,000–5,000 tons a year were produced. By 1896 the price had dropped to 25–50 marks, and the production had risen to 7,000 tons. By 1901 the price was 20 marks and the production 28,000 tons, rising to 40,000 tons in 1904, and to 90,000 tons in 1908.

During the war the production of benzol was greatly stimulated by the demand for toluol along with which large quantities of benzol are commercially produced, a condition which has naturally led to the more widespread use of benzol as a starting point for the manufacture of various organic compounds, as, for example, in the anilin color industry and in the production of pharmaceuticals and chemicals for the photographic industries. In addition, benzol is used as a motor fuel by blending it with gasoline, and, above all, as an organic solvent in the rubber industry, in artificial leather manufacture and lacquer production, and in similar processes.

In considering the practical problem of the use of benzol in industry it is important to remember that two very distinct types of processes are involved. In such industries as (*a*) the distillation of coal and

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[3] Following are the specifications for coke oven light distillates as prepared by the Barrett Co., one of the large producers of coal-tar distillates in the United States (4).

SPECIFICATIONS FOR COMMERCIALLY PURE BENZOL, NOT NECESSARILY NONCORROSIVE

(To be commonly known as "Commercially pure benzol")

Color.—The visible color shall be not darker than a solution of 0.0030 gm. of potassium bichromate in 1 liter of water. Comparison to be made in Nessler tubes, 50 c. c. size.

Distillation.—The product shall distill from start to dry within 2° C., within which degrees shall be included the true boiling point of pure benzol (80.2° C.).

The method of distillation shall be in accordance with method E-4, Jour. Ind. Eng. Chem. 10, 1008 (1918).

Acid wash.—The wash shall be not darker than No. 4 Barrett colorimetric scale. The test for wash shall be made in accordance with directions for test E-6, Jour. Ind. Eng. Chem. 10, 1008 (1918).

Acidity.—Finished product shall contain no "free" acid.

Specific gravity.—Specific gravity at 15.5° C. shall lie between 0.875 to 0.886. Specific gravity shall be determined by the use of Westphal balance.

SPECIFICATIONS FOR COMMERCIAL 90 PER CENT BENZOL

(To be commonly known as "Commercial 90 per cent benzol")

Color.—The visible color shall be not darker than a solution of 0.0030 gm. of potassium bichromate in 1 liter of water. Comparison to be made in Nessler tubes, 50 c. c. size.

Distillation.—The product shall start distillation (initial or first drop) at not below 76.2° C., 90 to 95 per cent shall distill at 100° C., all shall distill (end point) not above 120° C.

The method of distillation shall be in accordance with method E-4, Jour. Ind. Eng. Chem., 10, 1008 (1918).

Acid wash.—The wash shall be not darker than No. 6 Barrett colorimetric scale. The test for wash shall be made in accordance with directions for test E-6, Jour. Ind. Eng. Chem. 10, 1008 (1918).

Acidity.—Finished product shall contain no "free" acid.

Specific gravity.—Specific gravity at 15.5° C. shall lie between 0.875 and 0.887. Specific gravity shall be determined by the use of Westphal balance.

coal tar in the production of benzol, (*b*) the blending of motor fuels, and (*c*) the chemical industries, including oil extraction, dye and dye intermediates, manufacture of paints, varnishes, and stains, and of paints and varnish removers, benzol is used in large quantities; but the very nature of the industry demands that it be kept in a closed pipe-line system, any openings representing a loss of valuable vapors and making the system an inefficient one with a correspondingly large financial loss. In the class of plants mentioned, chronic benzol poisoning may be expected to play but a minor rôle, the hazard in acute cases being due to carelessness in the cleaning of tanks, breaks in the piping system, or similar accidents.

With regard to this first class of processes it seems certain that, with proper care in construction, maintenance, and operation, the use of benzol can be made sufficiently safe to warrant its employment. It

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(Footnote 3 Continued)

SPECIFICATIONS FOR COMMERCIALLY PURE TOLUOL

(To be commonly known as "Commercially pure toluol")

Color.—The visible color shall be not darker than a solution of 0.0030 gm. of potassium bichromate in 1 liter of water. Comparison to be made in Nessler tubes, 50 c. c. size.

Distillation.—The product shall distill from start to dry within 2° C., which degrees shall include the true boiling point of toluol (110.4° C.).

The method of distillation shall be in accordance with method E–4, Jour. Ind. Eng. Chem., 10, 1006 (1918).

Acid wash.—The wash shall be not darker than No. 4 Barrett colorimetric scale. The test for wash shall be made in accordance with directions for test E–6, Jour. Ind. Eng. Chem., 10, 1008 (1918).

Acidity.—Finished product shall contain no "free" acid.

Specific gravity.—Specific gravity at 15.5° C. shall lie between 0.864 and 0.874. Specific gravity shall be determined by the use of Westphal balance.

SPECIFICATIONS FOR COMMERCIAL XYLOL

(To be commonly known as "Commercial xylol." Formerly known as noncorrosive solvent naphtha (benzol 160°).)

Color.—The visible color shall be not darker than a solution of 0.0030 gm. of potassium bichromate in 1 liter of water. Comparison to be made in Nessler tubes, 50 c. c. size.

Distillation.—The product shall distill not over 5 per cent by volume at 130° C., 90 to 95 per cent shall distill at 160° C., all shall distill (end point) at not above 180° C.

The method of distillation shall be in accordance with method E–4, Jour. Ind. Eng. Chem., 10, 1006 (1918).

Acid wash.—The wash shall be not darker than No. 12 Barrett colorimetric scale. The test for wash shall be made in accordance with directions for test E–6, Jour. Ind. Eng. Chem., 10, 1006 (1918).

Acidity.—Finished product shall contain no "free" acid.

Sulphur content.—The product shall be free from H_2S and SO_2 as qualitatively determined in test E–9, Jour. Ind. Eng. Chem., 10, 1010 (1918).

Copper corrosion.—Commercial xylol shall meet Standard Method Copper Corrosion test dated June 21, 1921.

SPECIFICATIONS FOR SOLVENT NAPHTHA (NOT NECESSARILY NONCORROSIVE)

(To be commonly known as "Solvent naphtha")

Color.—The visible color shall be not darker than a solution of 0.0030 gm. of potassium bichromate in 1 liter of water. Comparison to be made in Nessler tubes, 50 c. c. size.

Distillation.—The product shall distill not over 5 per cent by volume at 130° C., 90 to 95 per cent shall distill at 160° C., all shall distill (end point) at not above 180° C.

The method of distillation shall be in accordance with method E–4, Jour. Ind. Eng. Chem., 10, 1006 (1918).

Acid wash.—The wash shall be not darker than No. 12 Barrett colorimetric scale. The test for wash shall be made in accordance with directions for test E–6, Jour. Ind. Eng. Chem., 10, 1010 (1918).

Acidity.—Finished product shall contain no "free" acid.

is true that fatal accidents have occurred and will no doubt continue to occur in such processes, just as such accidents occur from the use of steam boilers The danger is, however, in both cases a controllable one, to be met by careful attention to safety provisions and not by the abandonment of the substance in question. To this phase of the subject we have therefore devoted but little special attention.

In a second group of processes represented by the use of benzol (*a*) in the rubber industry, (*b*) in artificial leather manufacture, (*c*) in sanitary can manufacture, (*d*) in dry cleaning, and (*e*) in connection with the handling of paints, varnishes, and stains, benzol is employed chiefly as a solvent or a vehicle, and as a part of the process it must be removed so as to leave the originally dissolved substances in place. The method of removal of the benzol is usually to permit it to evaporate. In most cases evaporation takes place while the compound is cold; in some, however, the compound may be warmed, a procedure which naturally removes the benzol with greater rapidity. The vapors arising when benzol is thus permitted to evaporate in the workroom atmosphere constitute the principal cause of chronic benzol poisoning. It is chiefly in plants of this type that we have carried on our studies

In the rubber industry benzol finds two exceedingly important uses In rubber tire building the metal core on which the tire is built is usually painted with rubber cement This cement is often made in considerable quantities, for, during the course of the workday, large amounts of this substance are used. The rubber, after being compounded in the general compound room, is brought to the cement house, where it is cut into small pieces (about 4 pounds) and broken down in a pair of heated "break-down" rollers. It emerges in a rather porous condition and warm. It is then placed in a vertical tank containing benzol and provided with agitators and is stirred continuously until it is in solution. It would appear that this process might easily be conducted without hazard, but in making our studies we found one plant in which this was far from being the case.

In the further steps of tire building benzol is used in many plants. The layers of rubberized cord or cloth are carefully placed on the metal tire-building core, each layer being moistened with benzol prior to the application of the next layer of fabric. In addition to these two uses of benzol in the rubber industry there are, of course, many others. In fact, this substance has found very wide use due to its excellent solvent properties for rubber.

In the manufacture of so-called sanitary tin cans solder is not used to fix the top and bottom of the can to the cylindrical body portion, but these are crimped together instead, and it is necessary to provide some means of rendering the can absolutely air-tight. This is most

successfully accomplished by means of a rubber cement. The can ends are punched from sheet metal by means of an automatic punch press and then raised to the feeding end of a coating machine. In this machine the can end is held on a revolving vertical spindle, and as it revolves a very fine stream of benzol rubber cement is forced under air pressure on the can end. After the disk has made one complete revolution and a thin band of the cement is in place, the disk is automatically ejected and slides down a small incline to an oven, in which the benzol is largely but by no means completely evaporated. The can ends emerge from this oven in a warm condition and with benzol evaporating from the ring of cement about the periphery It is at this point that the inspectors, usually young women, are exposed to the benzol fumes while inspecting, cleaning, and packing the can ends

In the artificial leather industry, benzol is used in immense quantities. In producing artificial leather, cloth is fed through a machine at one point of which is a knife blade stretching across the full width of the cloth. Here the compound with which the cloth is to be coated is applied. This compound is a viscous liquid consisting of nitrocellulose and castor oil which is dissolved in ethylacetate or other suitable solvent. Benzol, in proportion of approximately 60 per cent, may be added as a diluent and derives much of its value from the fact that it is miscible with the other solvents and also with the nitrocellulose. The required color is given to the compound by the addition of suitable pigments, and the whole batch is thoroughly mixed until a homogeneous fluid results. This batch, when ready for delivery to the coating machine, is evenly spread over the cloth as it passes under the knife edge. The cloth next passes to an inclosed heated chamber in which the volatile substances are driven off, the colored nitrocellulose remaining behind on the cloth. The cloth emerges from the chamber in a warm condition and, although rather dry, still has a certain amount of solvent evaporating from its surface. It is this solvent which is still evaporating from the surface of the cloth and the solvent vapor escaping from the hot chamber which create a poison hazard. There is also a certain amount of evaporation which takes place from the surface of the pool of compound directly at the knife edge where it is being applied to the cloth, and this further increases the benzol content of the workroom air.

In the process of dry cleaning, the clothing and other articles to be cleaned are placed in horizontal tanks containing benzol, in which, by the continuous agitation of the tank, the grime and grease are dissolved. After this treatment the clothing is placed in centrifugal extractors by means of which the excess of benzol is removed. The articles are then taken from the extractor and, as a rule, are placed

in a warm-air cabinet in which the last traces of the benzol are volatilized. During this complete procedure from the time the washing tank is opened in order to permit of the addition of the articles to be cleaned to the time when the clothes are benzol free there exists much opportunity for the dissemination of benzol fumes in the workroom air, with the attendant dangers associated with these vapors.

Lastly, in the use of paints and penetrating stains, wood dyes, benzol finds very widespread use. This substance has deep penetrating power and for this reason is of great value for such purposes. When the paints are spread on the surface to be coated or treated, the vehicle evaporates, leaving the pigments behind In the case of paint and varnish removers, the compound is permitted to remain on the surface to be cleaned for some time preparatory to the process of scraping the surface. The hazard involved in this procedure must be small as compared with that in the use of benzol containing paints. It has been shown that the volatility of benzol is markedly affected by the other substances present in paint removers. Of 8.7 grams of benzol exposed in an open Petri dish, 98 per cent was evaporated in 100 minutes, whereas of 8 9 grams of a mixture composed of 55 per cent benzol, 45 per cent acetone, and 3 per cent paraffin only 0.4 per cent was evaporated in 300 minutes at the same temperature.[4]

II. ACUTE BENZOL POISONING

As in the case of so many toxic substances used in industry, instances of benzol poisoning fall into two rather distinct groups—acute and chronic poisoning, respectively. As a rule the cases of acute poisoning are obvious and readily diagnosed from a consideration of the history, symptoms, and circumstances surrounding the individual case. Some cases of acute benzol poisoning are due to the specific toxic effects of benzol, while others are undoubtedly due to benzol asphyxiation caused by the greater density of benzol vapor as compared with air, with the consequent exclusion of the air. Cases of asphyxiation are most likely to occur when a worker enters an inclosed space such as a tank which formerly contained benzol. Cases of chronic poisoning, however, are generally more obscure, the history of exposure is not so definite, and the symptom-complex and signs of poisoning as a rule are not so evident.

Acute benzol poisoning has been generally encountered in industrial practice, although case reports of benzol taken with suicidal intent or poisoning occurring in its nonindustrial application are also relatively frequent The early literature with reference to benzol as an industrial hazard is not unnaturally based on continental experience and later to a lesser extent on that obtained in England.

[4] Personal communication from Weiss and Downs.

It was not until the outbreak of the World War that benzol poisoning to an alarming extent manifested itself in the United States as a result of the wholesale production of benzene and its derivatives as by-products of the benzol manufactured for war purposes. Attention was first drawn to this problem in America by Alice Hamilton in her reports on industrial poisons encountered in the manufacture of explosives in this country (5) Prior to the war, however, Selling and others had reported on the toxic effects of benzol manifested in workers engaged in certain industries.

In 1862 there appeared in the Lancet (6) under the title of "A new industrial poison" a case report of a death due to the inhalation of vapor and the ingestion of a fluid containing "benzole." The patient became sick and drowsy, somewhat cyanotic, and developed a feeble pulse, the symptoms being those of gastro-intestinal irritation. On autospy no trace of the toxic substance was found in the stomach Congestion of the brain, lungs, and liver was present, and congestive patches were present in the gastric mucosa. The coroner decided that death was due to prussic acid, inasmuch as the "benzole" was found to contain some of this substance Benzol as such, however, appears to have played a part in this fatality.

Two very early cases of benzol poisoning are recorded in St. George's Hospital Reports for 1877–78 (7). In each of these instances a small amount of benzoline (benzol) was swallowed by mistake. Emetics were used apparently with success, although no mention is made of the outcome. In 1889 Averill (8) reported a case in which 3 to 4 drams of benzol in castor oil was taken by mistake with toxic effects. The patient recovered after receiving medical attention.

In 1910, at the International Congress of Industrial Hygiene, Rambousek (9) presented a report of 22 cases of acute benzol poisoning, 18 of which proved fatal. Most of the acute cases appear to have occurred in or around coal-tar stills and benzol tanks. He cites a case taken from the Factory Inspector's Report of Germany, for the year 1902 (10), of a worker who was overcome while painting the interior of an iron reservoir with a benzol-asphalt paint. In 1903 several other acute cases were recorded. While cleaning an extracting apparatus, a workman was fatally overcome by benzol fumes (11). Another worker who forgot to open the cold-water valve of a condenser was overcome, with fatal results, by the uncondensed vapors which were dispersed in the general room atmosphere (12). Another interesting case is recorded in the German Factory Reports (11) in which a worker engaged in the manufacture of antipyrene inhaled the concentrated benzol vapor with fatal results

Several cases of poisoning by swallowing benzene have been recorded Simonin (13) reports such a case of accidental poisoning in which the patient survived, but developed an odd type of skin

condition consisting of swelling and edema. Schmitz (14) records a fatal case of poisoning by injestion, the autopsy findings of which will be discussed later in this report Hetzer (15) reports an unusual case in which a man who had swallowed benzene was given prompt medical treatment and survived, but developed an intense toxic gastritis and later pyloric stenosis. Nick (16) cites the case of a workman who swallowed 80 grams of commercial benzene and developed the usual acute symptoms. Five cubic centimeters of a 10 per cent lecithin emulsion (Merck) was given by intravenous injection, about two hours after poisoning resulted, and definite improvement was noted within an hour. Thirty-six hours later all outward signs of poisoning had disappeared.

In the Prussian Factory Inspector's Report for the year 1904 (1) two fatal cases are described in workmen engaged in cleaning out a tar still. Death was due to fumes presumably of benzol, although this was not definitely established. In 1905 (17) three cases of poisoning, one of them fatal, occurred in a rubber factory where a benzol rubber composition was being mechanically spread on fabric The fabric, after being coated, passed over a long heated plate to facilitate drying, a procedure which gave rise to the production of large quantities of benzol vapor in the room air. The same year, 1905 (18), a worker was overcome by benzol fumes while cleaning out an empty tank which had contained crude benzol. A short while previously another similar case had occurred in the same factory. In another plant (19) two other cases of unconsciousness occurred, the workmen being overcome on entering a tank containing heavy oil used for cleaning purposes. In the Report of the Union of Chemical Industry for the year 1905 (20) a case is cited in which a night workman neglected to open a valve which allowed benzol distillate to flow into a collecting tank, and 8,000 liters of benzol overflowed. The workman was found dead in front of the building. Lewin (21) reports an interesting case in which an extracting vessel was being cleaned. The vessel had contained naphthaline and benzine, but had been empty for 22 hours. Furthermore, it had been washed out three times with cold water and twice with steam, then again allowed to stand all night filled with cold water. The workman who entered the tank was equipped with a pipe supplying compressed air. Despite these precautions he was overcome by the fumes of benzol which had dropped into the tank from a leaking overhead pipe. Several men who attempted to effect a rescue were overcome and one of the rescuers died within ten minutes after exposure. The original workman was finally saved by an engineer equipped with a breathing helmet. Dr. Alice Hamilton (22) reports a similar case which occurred in England. A benzene tank car had been emptied, washed with water, steamed, filled with water for 20 hours, then

washed out twice again boiled for 12 hours, and finally left for 10 days with the manhole open Despite these precautions the workman who entered the tank collapsed, and although he was removed in time, one of his rescuers succumbed These cases have led to the belief that muscular exertion tends to increase the susceptibility to poisoning and to decrease correspondingly the prospects for recovery in acute cases. That such a belief is tenable is illustrated by the many cases in which a passive victim who has been rendered unconscious by the benzol vapor recovers despite his relatively prolonged exposure, while an active rescuer succumbs with a fatal termination despite his relatively brief exposure to the same concentration of vapor. Lehmann stresses individual susceptibility as the important factor in such cases That marked variation in individual susceptibility does exist is amply demonstrated by clinical and experimental observation, findings with which we are in accord. It is possible and perhaps even likely, however, that in some cases the degree of activity of the subject plays a part in determining the outcome of any particular exposure.

Yet another case may be cited of a worker who was rendered unconscious while inspecting a benzene still. Two fellow workmen who attempted to rescue him were also overcome, one of them dying. All three had been negligent in failing to observe the rules requiring that the still be blown out with steam and that a watch mate be on guard outside for any emergency (23).

Two fatal cases are reported (24) from a factory where thick tar was being distilled under pressure and where the air pumps got out of order. The steam and the tar constituents were cooled and led into a drain. Near this drain was a ventilating shaft, and the two workmen were killed by the vapors rising through this vent duct. In 1908 two other fatal cases (25) occurred in the cleaning of a railway tank car The tank had been washed, but the workman, who entered with the approval of the foreman, succumbed and his mate on guard at the manhole had apparently gone in to his assistance as he also was found within the tank.

In 1909 (26) a very interesting case of benzol asphyxiation occurred in a coke-oven plant. Benzol was being collected in two large iron receivers. In order to control the valves it was necessary for the worker to enter a roofed-over pit in which the valves were located. During the filling period, the tank manholes were kept open. The only ventilation was that provided by two shafts which also served as entrances to the pit. A worker entered the pit to manipulate the valves and some time later he was found huddled up on the top of the receiver holding the valve by one hand. Later he fell to the bottom of the pit Three fellow workmen who went to his rescue

were affected by the fumes and were forced to retire. A fourth worker was lowered with a rope, but with immediately fatal results. Finally, with the aid of a smoke helmet, a rescuer brought up the corpse of the first victim. Rambousek (9) suggests that possibly other volatile substances contributed to the poisoning in this case. In his summary he also describes the similar case of a foreman who failed to regulate a condensation system so that benzol fumes were permitted to escape, to which he succumbed as did also a rescuer, the foreman's case terminating fatally. Yet another such case is given in the Annual Report of the British Chief Inspector of Factories (27) in which a sudden change in pressure caused a more rapid distillation of benzol vapor than the condenser could deal with, so that the workman was overcome by the excess uncondensed fumes Although he was resuscitated, he again succumbed when he returned to his work two nights later, the incident proving fatal

Rambousek cites another fatal poisoning which occurred when a worker in an anilin factory inhaled the vapor from benzol which escaped from leaky valves. Beisele (28) records the case of a man who died while painting the inside of a tank with tar dissolved in benzol, the usual acute symptoms being followed by death within five minutes of exposure. Buchmann, in 1911 (29), reported an acute case of poisoning produced by benzol escaping from a piece of defective chemical apparatus. In the German Factory Inspector's Reports (30) for the year 1912, three cases of poisoning are described, two of these terminating fatally. One case was that of a workman painting the interior of a barrel with benzene containing paint; another that of a workman in a cleaning establishment who entered the washing machine in which there still remained a small quantity of benzol; and one in which the cold water had not been turned on for the condensation of benzol vapor, with the resultant escape of benzol fumes and the death of the workman. Heffter (31) reports a case of an assistant manager who, while opening a stopped pipe, succeeded in starting the benzene flow but was unable to stop it. Benzene splashed over his clothes, but he nevertheless continued working while two helpers who were with him felt sick and were obliged to leave. The foreman finally fainted and died, although he received three hours' treatment with oxygen. Albaugh (32) cites a possible case of fatal poisoning in a young man employed as a spray painter in a varnishing department. Robinson (33) cites three cases of death from benzol fumes where employees persistently entered tanks regardless of rules requiring the removal of fumes and without protecting themselves with life lines and other protective devices provided by the employers He reports one of the cases in detail. A workman entered a tank which had but a slight odor of benzol, grew dizzy, crawled out and sat down on the ground

outside In a few moments, however, he became unconscious and never recovered

The demand for toluene for the manufacture of explosives during the World War led to the establishment of many plants for its production. Along with this enormous production of toluol, benzol was produced in very large quantities, and because of this wholesale increase in the handling of benzol, cases of acute poisoning suddenly increased By 1916 Alice Hamilton (5) had already collected and reported 14 acute cases, with seven fatalities, in this country. At that time she placed benzene poisoning third on the list of industrial poisons Of the 7 fatalities, 5 occurred among workmen in or around stills, the other 2 deaths occurring in the sulphonation of benzene during the synthetic production of phenol. Doctor Hamilton's first two cases were of steam fitters who were repairing pipes inside a benzene still. The still, before the repairs were begun, had been emptied and washed and was believed to be free from any dangerous concentration of benzol vapor Shortly after entering the still, one of the men became unduly hilarious and excited, singing and shouting. Attempts were made to get him out through the narrow manhole, but he was so irrational that it took 10 minutes to rescue him. At first his fellow workman within the tank helped in the rescue, but later he also succumbed to the fumes and was rendered unconscious. It took about 20 minutes to get this second workman out of the still, at the end of which time he was dead. In another establishment two workmen entered a still which was supposed to be free from benzol but apparently was not, as they soon succumbed and lapsed into coma. Vigorous treatment was administered, but the one who had been in the still for the shorter period did not survive. Yet another case was that of a workman who attempted to stop a leak in a still but was overcome by benzol fumes, with fatal results. Two fellow workers who went to his aid were also overcome, but survived. In the sulphonating room of a factory the sulphonated benzene flowed into a "liming vat" and apparently had carried some benzene over with it which volatilized because of the heat. A workman was found dead beside the liming vat, and benzol fumes were shown to be escaping from the liming vat, the sulphonating kettle, and the supply pump in the same room.

Harrington (34) reported the cases of two steamfitters, repairing pipes in a benzene still which was provided with a small manhole No mention is made of the preliminary cleansing of the still, but a fresh air supply was introduced through a 2-inch pipe under 60 pounds pressure. Within 45 minutes the older workman, aged 35, "acted crazy," becoming wildly excited and later unconscious In the attempt to get him out through the manhole, which took 20 minutes, the younger man succumbed and was found dead.

Dworetzky (35) described the interesting history of a peculiar epidemic in a large Russian rubber factory On March 25, 1914, many workers came down with headache and dizziness, nausea and vomiting, some falling to the floor unconscious. Several of them had to be sent home or to the hospital Next day the workers who had returned were put to work in another room where nothing had occurred the previous day. Strange to relate the same group of symptoms again appeared, with a total of 102 persons affected. By the fourth day over 230 persons were involved; and after nine days of trial, the factory (employing 17,000 persons) was forced to close. The workers ascribed the symptoms to the use of a new rubber solvent. At first they said a colored odoriferous solvent was used which caused no trouble. When the solvent was changed, however, to a clear and less odorous one, the outbreak was precipitated. The management pointed out that this was unlikely, for they substituted only the very highest grade of Baku naptha products The medical authorities (Bechterew) decided that the outbreak was one of hysteria or of benzene or benzol poisoning, together with hysteria. At the same time, in the tobacco factory of "Bogdanow" 18 workers (16 females and 2 males) came down with very similar symptoms, and in the tobacco firm of "Schaposchinkow" 20 workers fell unconscious to the floor. In the tobacco factory of Laferme eight cases appeared one day, and on the following day 89 additional cases, only one man in the entire factory remaining free from symptoms. Consideration was given at the time to the possibility of wholesale nicotine poisoning, but strangely enough seven cases appeared in a chocolate factory, then others in a garment factory, in a machine shop, and in other widely separated places of business. Fear was entertained by the populace that the poisoning (?) was due to a political plot. So intense was the excitement that the police suppressed all discussion of the cases and the factories closed their doors until the situation quieted down, so that the ultimate cause of the trouble was not ascertained. Dr. Alice Hamilton, while in Moscow in 1924, made inquiries concerning this outbreak and states that, after all the excitement had passed, investigation established the fact that the toxic substance responsible was benzene. It would seem that this "massenvergiftung" was, for the greater part, in the nature of hysteria, precipitated by a few actual cases of benzene poisoning which occurred in the rubber-making plant.

Adamkiewicz (36) reports a case of accidental acute poisoning in which a workman decended into a pump pit. After three hours he was carried out unconscious, but survived. A strong odor of benzol was present on the breath. Binder (37) cites a fatal case of a man employed in the making of benzol cement. He was overcome by fumes and later died. Cronin (38) reports five cases of posioning,

one being fatal The fatal case was that of a workman who descended into a trench surrounding a large benzol tank, in order to tighten a nut at the site of a leak He grew pale, dizzy, and weak and was forced to rest On reattempting to work he collapsed and died shortly after. Other workers in the same trench complained only of slight dizziness after two hours' exposure Later another workman shoveling earth back into the above mentioned trench became dizzy and collapsed and, on recovery, developed a sense of constriction in the chest, with tremor of extremities, and during the next four weeks had attacks of cardiac distress. Cronin cites three other cases of a spreader, a cement mixer, and a worker in a tank car, respectively, all of whom presented symptoms and signs of headache, dizziness, weakness, etc., which were relieved by going into the fresh air.

Cases of benzol poisoning occurring from the use of paints and lacquers containing this substance are of special interest. From this industry Rambousek (9) cites two interesting cases. In the first instance unconsciousness of a workman resulted from painting a retort with an anticorrosive paint. The accident was attributed to benzol fumes released by the paint in drying. The patient was rescued, given medical attention, and survived. In the second case, a rust-preventing paint with which a workman was painting the interior of a boiler, was the source of the benzol vapors. The paint contained considerable crude benzol, and the worker was overcome while working within a confined space He was quickly resuscitated, but the effects incapacitated him for eight days. Rambousek calls attention to Schaefer's investigation (39) into the question of paints containing benzol At the time (1909), Schaefer emphasized the hazard from benzol in paints, but considered the crude products, boiling between 130°-170° C., as relatively harmless In 1905 6 many of the cases which occurred were attributable to the fumes of hydrocarbons other than benzol, and a case is cited in which a painter was engaged in painting the double bottom of a ship with "black varnish oil." Exposed to the concentrated fumes, he developed severe inflammation of the respiratory system, from which he eventually died. The black varnish oil was a mixture of coal-tar pitch in light coal-tar oil, the oil distilling at 170° C., and amounting to 31-33 per cent of the mixture Schaefer cites other cases occurring in 1908-9. A workman was painting the inside of a boiler with a patented paint and was rendered unconscious Three men going to his rescue were also rendered unconscious. He cites another fatal case due to the use of a patent color which contained 30 to 40 per cent benzol and which was being used within an inclosed space (a chain well). This case proved fatal despite the fact that the worker was allowed out in the open air at frequent intervals.

So far as the pathology of acute benzol poisoning is concerned, probably the earliest autopsy record is that of Sury-Bienz (40) in 1888. The findings in this case consisted of bright red spots on the body; the blood was fluid and dark red Minute hemorrhages were found in pleural and intestinal mucosa. The lungs showed venous congestion, and a reddened condition of the lining of the air passages, which contained blood and mucous In an acute case caused by inhalation of benzol, Beinhauer (41) found the heart-blood fluid, with engorgement of the abdominal vessels and hemorrhages into the gastric mucosa Bloodstained mucus was found in the respiratory passages.

Buchmann (29) describes the autopsy findings in the acute case of a man killed by benzol escaping from a break in a chemical apparatus. Red spots were found on the skin, congestion of the internal organs was present, and minute hemorrhages in the pancreas were observed, though no striking findings were present on microscopical examination, and chemical tests of the organs were found to be negative for benzol. In her article on industrial poisons, Dr Alice Hamilton (5) reports seven fatal cases of benzol poisoning Two of these cases came to autopsy at the hands of Dr. H S. Martland. The main findings as summarized by Doctor Hamilton follow:

Case 1.—Cyanosis (blueness) of the mucous membranes and finger tips, cyanosis of liver, spleen, and kidneys; dilation of the right heart, which was filled with dark fluid blood, pleural ecchymoses (small purple spots, due to hemorrhages under the surface of the tissue) and small areas of acute interstitial emphysema in the lungs.

Case 2—Cyanosis of mouth, lips, and of finger tips; small amount of frothy fluid escaping from the mouth; cyanosis of the brain, heart, liver, and kidneys; petechial hemorrahages (small ecchymoses) in pleura and pericardium, reddened and irritated bronchi On section of the lungs a decided odor of benzene was given off There was an abnormal quantity of phenol in the urine, but not benzene.

In general, the symptoms and signs of acute poisoning by inhalation are faintness, dizziness, excitation, pallor and later flushing, weakness, headache, breathlessness, apprehension of death, tightness in the chest, visual disturbances, tremor, weakness in extremities, rapid pulse, cyanosis, unconsciousness or narcosis, collapse, tremor and convulsions, coma, acute mania or delirium preceding sudden death at times, or in other cases death occurring several hours to several days subsequent to exposure. In extreme concentrations, asphyxiation with death results from respiratory paralysis. When taken by mouth, the usual local signs and symptoms of an acute toxic gastritis are seen in addition to the general systemic manifestations.

In treatment of acute benzol poisoning the patient should, of course, be removed from the danger area and placed in a comfortable reclining

position. If carbon dioxide-oxygen, and respirator are at hand, this means of respiratory stimulation should be at once applied. If only oxygen tank and respirator be available, they may be used; and if no such apparatus be available, artificial respiration by the prone pressure or Schaeffer method should be applied until the patient has been breathing in a satisfactory manner for some minutes. The patient should be carefully watched, and at the first sign of respiratory failure or slowing of respiration the artificial respiration should be resumed. At all times it is important to keep the body warm by applying heat to the body and extremities. Cardiac and respiratory stimulants, such as caffeine, may be given.

In cases where benzol has been taken by mouth, the usual gastric lavage may be resorted to, followed by demulcents or bland drinks. Lecithin emulsion may be administered intravenously, as advocated by Nick, in doses of 5 c.c of a 10 per cent solution.

Prolonged convalescence is essential in order to avoid complications.

Generally, cases of acute poisoning from inhalation are either rapidly fatal or respond favorably to treatment with more or less complete recovery within a short period. Late manifestations may appear, however. Cronin (38) reports spells of cardiac distress for four weeks after recovery. This was true also in Lewin's case, which presented cardiac distress, dizzy spells, and general depression. In the Report of the Chief Inspector of Factories and Workshops of Great Britain for 1918 (42) a case is reported of acute posioning due to too rapid distillation of benzol. The worker was overcome, but was revived and apparently passed through the experience sucessfully. On the second night of his return to work, however, for no apparent reason he lapsed into unconsciousness from which he never recovered. Inflammation of the respiratory tract and pleurisy may set in (43) (39) (9) Pyloric stenosis has been reported after poisoning by swallowing benzene (15). Albuminuria with casts and albumen may occur; also bloody stools (15). It is well to note that in many of the acute cases of poisoning reported, other volatile substances in addition to benzol have been present and probably have contributed to the seriousness of the picture presented. Schaeffer, in 1905–06, called attention to poisoning by the inhalation of other hydrocarbons. Hydrogen sulphide gas is frequently encountered in tar distilleries (9), and more rarely carbonic oxide (44). In many of the quick-drying paints, other solvents present in addition to the benzol probably play a part in the production of acute symptoms, and such symptoms are frequently attributed to benzene. That symptoms of acute benzol poisoning should be rather frequent is not surprising in the light of the findings given by Lehmann, who found that concentrations of 0.015 grams per liter of air (4,700 parts per

million) will produce confusion within half an hour, while concentrations from 0 02 to 0 03 grams per liter (6,160 to 9,190 parts per million) produce definite symptoms of poisoning within a few hours. That the benzol vapor in such concentrations is rapidly taken up is indicated by the fact that 80 per cent of the vapor is absorbed within a short period on exposure to concentrations of 4,700 parts per million From these experiments, however, no definite ratio or proportion could be established between the absolute amount of benzol in the air and the amount absorbed. The signs and symptoms of acute poisoning will therefore depend not only on the concentration present but also upon the susceptibility of the individual and, to a lesser extent, perhaps, upon the activity in which he is engaged.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Typhoid Versus Tourists.—Anon *Ohio Health News*, vol. 2, No. 9, May 1, 1926, pp 1–2 (Abstracted by Isador W. Mendelsohn.)

This article discusses various precautions to be observed by the camper to protect himself against disease, particularly the matter of safe water After two summers' work there are 108 wells in Ohio now bearing the Seal of Safety of the Ohio State Department of Health.

The Engineering Aspects of Oyster Pollution.—R. E. Tarbett, Sanitary Engineer, United States Public Health Service, Washington, D. C, *American Journal of Public Health*, vol 16, No. 1, January, 1926, pp 5–12. (Abstracted by R. E. Tarbett)

The question of oyster pollution is considered in two parts—first, conditions existing in growing areas, and, second, pollution due to insanitary handling, shucking, etc. Patrol over the sanitary conditions of growing and bedding areas appears to be the most important factor in the production of safe oysters. The protection of such areas, however, presents a difficult problem because of the many and varying influences involved

The relation of the *B coli* content of the shell liquor to the overlying water is discussed, with the conclusion that, with the data available, and without considering other data, the determination of the safety of oysters by the *B coli* content of the shell liquor is misleading.

Oysters, being found only in tidal estuaries, are subject to possible polluting influences originating in fresh water streams discharging into those estuaries as well as to polluting influences in the tidal estuaries. Studies of pollution, therefore, involve studies of the streams above tidal influence, and of the tidal estuary or bay itself. These studies involve the estimates of amount of pollution entering the streams, together with the approximate dilution taking place under different conditions of stream flow and probable time interval

elapsing before entry of pollution to the area of tidal influence; they also give information on the amount of pollution discharged to tidal water, together with the action of tides, currents, bottom topography, and the like Lags in tidal currents, vertical stratification, and barrier action of bars interfere greatly with estimates of time intervals and of movements of waters. In addition to the physical considerations, *B. coli* content of the water and of the shellfish should be studied.

Movements of water, effects of dilution, and conditions of pollution may best be studied by the establishment of *B. coli* contours under different conditions of tides and winds.

The handling, shucking, and packing of oysters appears somewhat analogous to the handling of milk, and should be controlled in the same manner in which the handling of milk is controlled.

Chlorination, in respect to oyster purification, should be considered only as an additional safeguard against accidental pollution and not as a substitute for sanitary control over growing areas.

Effect of Storage and Changing Sea Water on Contaminated Oysters.—Charles Krumwiede, William H Park, Georgia Cooper, Marie Grund, Charles H. Tyler, and Carolyn Rosenstein, Bureau of Laboratories, Department of Health, New York City. The *American Journal of Public Health,* vol. 16, No. 3, March, 1926, pp. 263-268. (Abstracted by R. E Tarbett.)

The experiments covered in this article are a continuation of the experiments on the effect of chlorination on oysters contaminated with typhoid bacilli, reported in the February issue of the *American Journal of Public Health.*

The experiments reported on in this article cover the observations of the effect of dry storage and the effect of changing sea water. The oysters in the experiment were obtained from Great South Bay, Long Island, and the water used was obtained from the same bay. Two lots of oysters were contaminated by suspending them in wire crates in tanks containing 8 gallons of contaminated sea water—Lot A, water contaminated by adding a suspension of feces containing *B. typhosus;* Lot B, water contaminated with freshly isolated cultures of *B. typhosus.* The oysters were allowed to drink actively over one night, and were then stored under temperature conditions approximating that of the colder months.

The materials used for examinations were as follows: Washings from the shell, using 10 c. c. of broth per oyster; the shell liquor; and the body of the oyster emulsified in 5 c. c. of broth. Examinations were made at intervals of 1, 5, 7, 9, 10, 14, 21, 28, 35, 41, and 49 days. All the oysters were dead at the end of 41 days. While the number of *B. typhosus* organisms that could be isolated was greatly reduced, positive results were, however, obtained in the shell liquor

and the body emulsion on the forty-ninth day. The shell-washing examination was negative at the end of two weeks in Lot A and five weeks in Lot B. A parallel series of observations on the presence of *B coli* showed that the rate of reduction was somewhat parallel with that of *B. typhosus* Experiments were made to show whether or not a dead oyster was a favorable culture medium for the typhoid bacillus. In oysters contaminated with pure cultures and held at room temperature there was slow multiplication, approximating 15 times, during the first 7 days, with a rapid rise in multiplication to approximately 1,000 times after 10 days In ice-box temperature there was a moderate increase to the seventh day, followed by a decrease, with approximately the original number on the tenth day. Oysters contaminated with stool suspensions held at room temperature were so overgrown with other organisms as to prevent isolation by the direct plating method, but enrichment methods showed *B typhosus* on the tenth day At ice-box temperature this organism was also isolated on the tenth day. Reference is made to results of similar experiments carried on by others.

Fifty oysters were contaminated with typhoid feces and placed in 4 gallons of fresh sea water. This experiment was carried on during a period of 24 days, during which time the water was changed 18 times The temperature of the water was kept between 60° and 70° F. The results indicated that three successive changes of water will give a reduction of about 99 per cent in typhoid bacilli However, at the end of the twenty-fourth day, at which time the oysters were dead, it was possible to isolate the organism from the liquor-body emulsion and its shell.

The length of time that *B. typhosus* will survive in oysters during winter months in natural waters was also investigated. Oysters were obtained from beds in a condemned area and the experiment was carried on in the same area. These oysters were contaminated with a relatively light dose of typhoid feces and submerged in wire crates. The temperature conditions during the experiment were such as to indicate that the oysters were relatively inactive. The results show that the organism was isolated from the liquor up to the tenth day; from the bodies up to the thirty-first day; and from the gills up to the fifty-first day.

It the experiment Endo medium and brilliant green agar were employed, with brilliant green broth used for enrichment. The authors conclude that the only safe oyster is one which has been protected from any contamination with fecal pathogens for at least some months prior to harvesting.

A HEALTH STUDY OF TEN THOUSAND MALE INDUSTRIAL WORKERS

In the near future a bulletin[1] will be issued by the Section of Industrial Hygiene and Sanitation of the United States Public Health Service, entitled "A Health Study of 10,000 Male Industrial Workers."

This study represents the analysis of the physical condition of one of the largest groups of industrial workers yet studied, and includes workers in 10 industries.

Although the original study was made entirely from the viewpoint of industrial hygiene, the publication contains a large amount of basic material of especial value to the physiologist, relating to the blood pressure and pulse rate, vital capacity, measurements of the body and other physiological or physical facts ascertained in routine physical examination.

Of special interest to the physician is the contribution to medical knowledge made by this study regarding the distribution of defects and diseases at different ages. The graphs prepared to bring out these observations suggest the trend of certain diseases throughout the life of the industrial worker, and are also more or less applicable to the general male population of adult ages. This information, which represents a new point of view from which to judge causes of sickness and death, may be regarded as unique in the literature of vital statistics.

DEATHS DURING WEEK ENDED JUNE 19, 1926

Summary of information received by telegraph from industrial insurance companies for week ended June 19, 1926, and corresponding week of 1925 (From the Weekly Health Index, June 24, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended June 19, 1926	Corresponding week 1925
Policies in force	64, 473, 873	60, 266, 214
Number of death claims	12, 127	12, 057
Death claims per 1,000 policies in force, annual rate	9. 8	10. 4

[1] Public Health Bulletin, No 162.

Deaths from all causes in certain large cities of the United States during the week ended June 19, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, June 24, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended June 19, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended June 19, 1926 [2]
	Total deaths	Death rate [1]		Week ended June 19, 1926	Corresponding week, 1925	
Total (66 cities)	6,589	11.9	11.4	767	743	[3] 60
Akron	31			2	5	21
Albany [4]	33	14.5	8.0	2	2	42
Atlanta	83			14	7	
White	52			9		
Colored	31	(5)		5		
Baltimore [4]	192	12.4	12.6	24	16	70
White	150			16		57
Colored	42	(5)		8		130
Birmingham	59	14.6	13.4	8	12	
White	26			3		
Colored	33	(5)		5		
Boston	176	11.7	12.0	21	22	59
Bridgeport	23			2	1	34
Buffalo	134	12.8	14.0	23	19	96
Cambridge	20	8.5	7.8	5	2	83
Camden	18	7.2	12.2	3	5	51
Canton	17	8.1	7.4	3	0	67
Chicago [4]	683	11.7	9.8	81	63	72
Cincinnati	128	16.2	13.4	13	8	81
Cleveland	197	10.7	8.5	19	19	49
Columbus	69	12.6	11.0	5	4	46
Dallas	48	12.5	18.3	8	9	
White	36			5		
Colored	12	(5)		3		
Dayton	47	13.8	11.2	2	1	31
Denver	50	9.1	13.9	6	7	
Des Moines	35	12.5	8.8	2	1	33
Detroit	306	12.4	11.1	52	37	84
Duluth	32	14.8	6.6	5	1	117
El Paso	26	12.4	11.9	6	8	
Erie	29			4	2	76
Fall River [4]	32	12.7	8.5	4	2	58
Flint	18	6.9	5.2	2	4	33
Fort Worth	17	5.6	9.9	5	15	
White	12			4		
Colored	5	(5)		1		
Grand Rapids	27	9.0	12.2	5	2	72
Houston	56			6	10	
White	41			5		
Colored	15	(5)		1		
Indianapolis	108	15.3	13.1	14	8	102
White	87			12		101
Colored	21			2		110
Jersey City	49	8.0	9.4	5	7	35
Kansas City, Kans	30	13.4	10.3	2	3	35
White	18			1		21
Colored	12	(5)		1		131
Kansas City, Mo	85	11.8	11.2	10	15	
Los Angeles	182			17	23	47
Louisville	72	12.1	13.1	3	7	26
White	53			3		30
Colored	19	(5)		0		0
Lowell	26			0	1	0
Lynn	20	14.5	13.2	3	2	75
Memphis	64	18.9	24.5	8	12	
White	32			7		
Colored	32	(5)		1		
Milwaukee	118	11.9	11.4	10	9	46
Minneapolis	101	12.1	11.8	15	11	83

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births

[3] Data for 64 cities

[4] Deaths for week ended Friday, June 18, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta 31, Baltimore 15, Birmingham 30, Dallas 15, Forth Worth 14, Houston 25, Kansas City, Kans , 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C., 25

Deaths from all causes in certain large cities of the United States during the week ended June 19, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, June 24, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended June 19, 1926: Total deaths	Week ended June 19, 1926: Death rate [1]	Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year: Week ended June 19, 1926	Deaths under 1 year: Corresponding week, 1925	Infant mortality rate, week ended June 19, 1926 [1]
Nashville [4]	40	15.2	13.1	8	4	
White	21			6		
Colored	19	(5)		2		
New Bedford	18			4	4	70
New Haven	32	9.2	9.6	7	3	96
New Orleans	139	17.3	19.6	18	33	
White	80			8		
Colored	59	(5)		10		
New York	1,278	11.2	11.0	143	149	58
Bronx borough	166	9.6	8.3	10	16	33
Brooklyn borough	405	9.4	9.8	53	55	54
Manhattan borough	557	15.5	14.2	59	58	65
Queens borough	113	7.7	7.3	16	11	73
Richmond borough	37	13.5	19.2	5	6	88
Newark, N. J	87	9.9	10.6	12	12	57
Norfolk	39	11.7	9.2	6	4	112
White	15			1		30
Colored	24	(5)		5		249
Oakland	50	10.0	8.8	3	4	35
Oklahoma City	25			2	2	
Omaha	42	10.2	9.6	3	6	31
Paterson	28	10.2	9.6	3	7	52
Philadelphia	432	11.2	11.5	35	52	46
Pittsburgh	162	13.3	12.2	17	11	56
Portland, Oreg	74			2	11	20
Providence	62	11.8	12.5	7	3	58
Richmond	53	14.6	13.7	8	4	101
White	27			5		98
Colored	26	(5)		3		105
Rochester	62	10.1	8.4	3	3	24
St. Louis	185	11.6	12.5	12	25	
St. Paul	51	10.7	10.2	5	4	44
Salt Lake City [4]	33	12.9	10.4	2	5	28
San Antonio	67	17.0	20.3	22	22	
San Diego	34	16.1	13.8	2	3	42
San Francisco	163	15.0	11.3	9	6	54
Schenectady	15	8.4	9.0	1	1	29
Seattle	59			1	6	9
Somerville	17	8.9	8.4	1	1	26
Spokane	18	8.6	12.4	2	2	47
Springfield, Mass	27	9.7	9.9	4	2	58
Syracuse	36	10.2	11.7	6	6	76
Tacoma	16	7.9	12.0	3	3	70
Toledo	71	12.6	9.8	9	2	87
Trenton	29	11.3	16.6	5	3	84
Utica	25	12.7	14.4	4	1	88
Washington, D. C	143	14.1	14.8	19	15	108
White	87			11		91
Colored	56	(5)		8		146
Waterbury	28			4	2	86
Wilmington, Del	24	10.1	8.5	3	1	70
Worcester	55	14.9	10.7	3	7	35
Yonkers	24	10.8	9.2	3	2	67
Youngstown	30	9.5	7.2	5	4	64

For footnotes 1, 2, 4, and 5, see p. 1379.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended June 26, 1926

ALABAMA

	Cases
Cerebrospinal meningitis	1
Chicken pox	10
Diphtheria	5
Influenza	4
Lethargic encephalitis	1
Malaria	49
Measles	167
Mumps	10
Ophthalmia neonatorum	1
Pellagra	24
Pneumonia	25
Poliomyelitis	2
Rabies	1
Scarlet fever	6
Smallpox	18
Tetanus	6
Tuberculosis	348
Typhoid fever	33
Whooping cough	97

ARIZONA

	Cases
Chicken pox	1
Diphtheria	2
German measles	5
Influenza	1
Measles	2
Mumps	2
Paratyphoid fever	2
Pneumonia	1
Scarlet fever	5
Trachoma	1
Tuberculosis	11
Typhoid fever	2
Whooping cough	7

ARKANSAS

	Cases
Chicken pox	8
Diphtheria	3
Hookworm disease	2
Influenza	4
Malaria	39
Measles	23
Mumps	2
Pellagra	12
Scarlet fever	8
Smallpox	1
Trachoma	2
Tuberculosis	7
Typhoid fever	26
Whooping cough	15

CALIFORNIA

	Cases
Cerebrospinal meningitis	
Long Beach	1
Los Angeles	2
Chicken pox	137
Diphtheria	100
Influenza	1
Measles	353
Mumps	133
Poliomyelitis	
Alameda County	1
Long Beach	1
Maywood	1
Santa Paula	1
Scarlet fever	126
Smallpox	12
Tuberculosis	175
Typhoid fever	24
Whooping cough	43

COLORADO

	Cases
Chicken pox	28
Diphtheria	13
Influenza	1
Malaria	1
Measles	32
Mumps	2
Pneumonia	5
Scarlet fever	8
Smallpox	4
Tuberculosis	20
Typhoid fever	2
Whooping cough	21

CONNECTICUT

	Cases
Cerebrospinal meningitis	1
Chicken pox	39
Diphtheria	13
German measles	21
Lethargic encephalitis	1
Measles	244
Mumps	5
Pneumonia (broncho)	24
Pneumonia (lobar)	26
Scarlet fever	49
Smallpox	1
Tetanus	1
Tuberculosis (all forms)	44
Typhoid fever	1
Whooping cough	33

DELAWARE

	Cases
Malaria	2
Measles	22
Pneumonia	2
Scarlet fever	5
Tuberculosis	1
Typhoid fever	3

FLORIDA

	Cases
Chicken pox	4
Diphtheria	8
German measles	1
Malaria	11
Measles	17
Mumps	9
Pneumonia	3
Poliomyelitis	1
Scarlet fever	4
Smallpox	13
Tetanus	1
Tuberculosis	8
Typhoid fever	9
Whooping cough	29

GEORGIA

	Cases
Cerebrospinal meningitis	1
Chicken pox	7
Dengue	2
Diphtheria	1
Dysentery	40
Hookworm disease	1
Influenza	32
Malaria	41
Measles	72
Mumps	15
Pellagra	10

GEORGIA—continued

	Cases
Pneumonia	11
Scarlet fever	1
Septic sore throat	4
Smallpox	22
Tuberculosis	25
Typhoid fever	47
Whooping cough	8

IDAHO

	Cases
Cerebrospinal meningitis—Kellogg	1
Chicken pox	22
Diphtheria	3
Measles	4
Scarlet fever	1
Smallpox	1
Trachoma—Idaho Falls	1
Typhoid fever	1
Whooping cough	20

ILLINOIS

	Cases
Cerebrospinal meningitis	
Cook County	1
De Kalb County	1
La Salle County	1
Chicken pox	291
Diphtheria	92
Influenza	137
Lethargic encephalitis	
Jo Daviess County	1
Kane County	1
St. Clair County	1
Shelby County	1
Measles	980
Mumps	66
Pneumonia	443
Poliomyelitis	
Grundy County	1
Hardin County	1
Scarlet fever	191
Smallpox	12
Tuberculosis	533
Typhoid fever	16
Whooping cough	166

INDIANA

	Cases
Chicken pox	56
Diphtheria	13
Influenza	12
Measles	467
Pneumonia	6
Scarlet fever	57
Smallpox	62
Tuberculosis	40
Typhoid fever	12
Whooping cough	80

IOWA

	Cases
Cerebrospinal meningitis	2
Chicken pox	10
Diphtheria	12
German measles	1
Measles	35
Mumps	2
Scarlet fever	19
Smallpox	40
Tuberculosis	13
Whooping cough	41

KANSAS

	Cases
Cerebrospinal meningitis—New Albany	1
Chicken pox	21
Diphtheria	4
Dysentery	2
German measles	3
Influenza	8
Malaria	1
Measles	137
Mumps	6
Pneumonia	24
Poliomyelitis—Pratt	1
Scarlet fever	22
Smallpox	9
Tetanus	2
Tuberculosis	37
Typhoid fever	8
Whooping cough	99

LOUISIANA

Diphtheria	6
Influenza	24
Malaria	13
Paratyphoid fever	4
Pellagra	13
Pneumonia	39
Poliomyelitis	1
Scarlet fever	5
Smallpox	5
Tuberculosis	29
Typhoid fever	37
Whooping cough	9

MAINE

Chicken pox	5
Diphtheria	3
German measles	8
Lethargic encephalitis	1
Measles	176
Mumps	9
Pneumonia	8
Poliomyelitis	1
Scarlet fever	12
Tuberculosis	7
Typhoid fever	1
Whooping cough	14

MARYLAND [1]

Cerebrospinal meningitis	1
Chicken pox	47
Diphtheria	17
Dysentery	1
German measles	3
Influenza	3
Malaria	1
Measles	154
Mumps	67
Paratyphoid fever	2
Pneumonia (broncho)	15
Pneumonia (lobar)	20
Scarlet fever	79
Septic sore throat	4
Tuberculosis	122
Typhoid fever	9
Typhus fever	1
Vincent's angina	1
Whooping cough	50

[1] Week ended Friday

MASSACHUSETTS

	Cases
Cerebrospinal meningitis	4
Chicken pox	167
Conjunctivitis (suppurative)	11
Diphtheria	67
German measles	132
Influenza	8
Lethargic encephalitis	3
Measles	580
Mumps	105
Ophthalmia neonatorum	5
Pneumonia (lobar)	60
Scarlet fever	191
Septic sore throat	1
Tetanus	1
Trachoma	1
Trichinosis	2
Tuberculosis (pulmonary)	138
Tuberculosis (other forms)	23
Typhoid fever	6
Whooping cough	172

MICHIGAN

Diphtheria	136
Measles	769
Pneumonia	29
Scarlet fever	244
Smallpox	13
Tuberculosis	51
Typhoid fever	7
Whooping cough	94

MINNESOTA

Cerebrospinal meningitis	1
Chicken pox	94
Diphtheria	50
Influenza	3
Lethargic encephalitis	1
Measles	361
Pneumonia	1
Scarlet fever	146
Smallpox	5
Tuberculosis	52
Typhoid fever	9
Whooping cough	28

MISSISSIPPI

Diphtheria	1
Scarlet fever	7
Smallpox	2
Typhoid fever	21

MISSOURI

(Exclusive of Kansas City)

Chicken pox	12
Diphtheria	53
Measles	200
Mumps	5
Pneumonia	1
Scarlet fever	73
Smallpox	8
Trachoma	4
Tuberculosis	37
Typhoid fever	16
Whooping cough	68

MONTANA

	Cases
Chicken pox	4
Diphtheria	11
Measles	21
Mumps	1
Rocky Mountain spotted fever	1
Scarlet fever	14
Smallpox	4
Whooping cough	1

NEBRASKA

	Cases
Cerebrospinal meningitis	1
Chicken pox	13
Diphtheria	2
German measles	2
Measles	33
Mumps	1
Pneumonia	1
Scarlet fever	23
Smallpox	11
Tetanus	1
Tuberculosis	2
Whooping cough	12

NEW JERSEY

	Cases
Cerebrospinal meningitis	3
Chicken pox	146
Diphtheria	69
Influenza	2
Measles	527
Pneumonia	54
Poliomyelitis	1
Scarlet fever	172
Trachoma	1
Typhoid fever	10
Whooping cough	86

NEW MEXICO

	Cases
Chicken pox	3
Diphtheria	3
Measles	10
Pellagra	2
Scarlet fever	1
Smallpox	1
Tuberculosis	13
Typhoid fever	2
Whooping cough	23

NEW YORK
(Exclusive of New York City)

	Cases
Cerebrospinal meningitis	1
Chicken pox	183
Diphtheria	68
German measles	258
Influenza	2
Lethargic encephalitis	2
Malaria	9
Measles	1,747
Mumps	103
Ophthalmia neonatorum	2
Pneumonia	159
Poliomyelitis	3
Scarlet fever	115
Smallpox	5
Tetanus	5
Typhoid fever	11
Vincent's angina	7
Whooping cough	338

NORTH CAROLINA

	Cases
Chicken pox	53
Diphtheria	18
German measles	51
Measles	256
Poliomyelitis	2
Scarlet fever	20
Septic sore throat	1
Smallpox	24
Typhoid fever	31
Whooping cough	313

OKLAHOMA
(Exclusive of Oklahoma City and Tulsa)

	Cases
Cerebrospinal meningitis—Ottawa County	1
Chicken pox	2
Diphtheria	3
Influenza	28
Malaria	25
Measles	29
Mumps	2
Pellagra	14
Pneumonia	5
Scarlet fever	10
Smallpox	3
Typhoid fever	29
Whooping cough	71

OREGON

	Cases
Anthrax	1
Cerebrospinal meningitis	2
Chicken pox	22
Diphtheria	17
Influenza	7
Measles	65
Mumps	17
Pneumonia	[1] 3
Scarlet fever	26
Septic sore throat	1
Smallpox:	
Lane County	12
Scattering	11
Tuberculosis	10
Typhoid fever	6
Whooping cough	23

PENNSYLVANIA

	Cases
Cerebrospinal meningitis:	
Cambridge Springs	1
Pittsburgh	1
Chicken pox	252
Diphtheria	120
German measles	66
Impetigo contagiosa	1
Malaria	1
Measles	1,840
Mumps	53
Pneumonia	18
Scabies	9
Scarlet fever	319
Trachoma	2
Tuberculosis	133
Typhoid fever	18
Whooping cough	351

[1] Deaths.

RHODE ISLAND

	Cases
Diphtheria	1
German measles	5
Influenza	1
Measles	42
Mumps	1
Ophthalmia neonatorum	2
Scarlet fever	2
Septic sore throat	1
Tuberculosis	14
Typhoid fever	1
Whooping cough	5

SOUTH DAKOTA

Cerebrospinal meningitis	1
Chicken pox	4
Diphtheria	1
Measles	16
Mumps	2
Scarlet fever	29
Smallpox	1
Typhoid fever	3
Whooping cough	2

TENNESSEE

Chicken pox	10
Diphtheria	4
Dysentery	3
Influenza	4
Malaria	29
Measles	148
Mumps	2
Ophthalmia neonatorum	1
Pellagra	25
Pneumonia	6
Rabies	1
Scarlet fever	6
Smallpox	
Memphis	13
Scattering	5
Tuberculosis	46
Typhoid fever	23
Whooping cough	44

TEXAS

Anthrax	10
Cerebrospinal meningitis	1
Chicken pox	33
Dengue	4
Diphtheria	16
Dysentery	4
Influenza	38
Measles	16
Mumps	71
Paratyphoid fever	4
Pellagra	5
Pneumonia	10
Poliomyelitis	1
Scarlet fever	27
Smallpox	30
Trachoma	3
Tuberculosis	31
Typhoid fever	29
Whooping cough	102

UTAH

	Cases
Chicken pox	9
Diphtheria	6
German measles	8
Measles	19
Mumps	6
Pneumonia	1
Scarlet fever	6
Smallpox	1
Tuberculosis	1
Typhoid fever	1
Whooping cough	77

VERMONT

Chicken pox	28
Measles	56
Mumps	11
Scarlet fever	1
Typhoid fever	2
Whooping cough	29

WASHINGTON

Cerebrospinal meningitis	
Spokane	5
Thurston County	1
Chicken pox	57
Diphtheria	13
German measles	12
Measles	107
Mumps	21
Poliomyelitis—Tacoma	1
Scarlet fever	32
Smallpox	13
Tuberculosis	8
Typhoid fever	6
Whooping cough	23

WEST VIRGINIA

Chicken pox	22
Diphtheria	12
Influenza	1
Measles	636
Scarlet fever	20
Smallpox	14
Tuberculosis	21
Typhoid fever	11
Whooping cough	22

WISCONSIN

Milwaukee	
Chicken pox	88
Diphtheria	17
German measles	4
Influenza	1
Measles	209
Mumps	39
Pneumonia	10
Scarlet fever	16
Tuberculosis	13
Typhoid fever	1
Whooping cough	67

WISCONSIN—continued

spring

	Cases
Cerebrospinal meningitis	1
Chicken pox	72
Diphtheria	27
German measles	88
Influenza	13
Measles	881
Mumps	58
Pneumonia	9
Poliomyelitis	1
Scarlet fever	38
Tuberculosis	28
Typhoid fever	3
Whooping cough	58

WYOMING

	Cases
Chicken pox	7
Diphtheria	3
German measles	1
Measles	8
Mumps	3
Pneumonia	1
Rocky Mountain spotted fever	
Fremont County	1
Johnson County	2
Natrona County	1
Scarlet fever	10
Whooping cough	12

Report for Week Ended June 19, 1926

NORTH DAKOTA

	Cases
Chicken pox	3
Diphtheria	2
German measles	10
Measles	21

NORTH DAKOTA—continued

	Cases
Mumps	1
Scarlet fever	23
Smallpox	4
Tuberculosis	2

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
May, 1926										
Colorado	0	71	7		342		0	133	7	3
Georgia	3	60	191	130	581	51	1	36	138	52
Illinois	13	300	233	9	5,095	1	4	1,397	137	34
Maine	3	9	374	0	1,403	0	1	95	0	13
Maryland	1	69	54	2	1,809	0	0	244	0	24
Michigan	0	349	23	0	6,441		4	1,288	45	23
Minnesota	2	208	16	0	3,526		2	1,313	52	9
Mississippi	2	40	1,294	5,334	1,693	1,178	1	31	77	109
Missouri	2	311	40	9	7,227	1	0	1,122	17	64
Montana	3	5	33	3	447		0	138	24	4
North Carolina	1	65			1,705		0	87	190	21
Ohio	6	313	164	2	8,824	0	0	1,363	201	39
Oklahoma [1]	1	35	540	168	599	92	1	173	111	58
West Virginia	2	57	103		3,394		0	165	17	57
Wyoming	0	6	8		26		0	120	6	0

[1] Exclusive of Oklahoma City and Tulsa

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of May, 1926, to other State health departments by departments of health of certain States

Referred by—	Cerebrospinal meningitis	Diphtheria	German measles	Measles	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever
Connecticut	1				1			
Illinois				1			11	
Minnesota							30	
New York		2	1		1	3		1

PLAGUE-ERADICATIVE MEASURES IN LOS ANGELES, CALIF.

The following items were taken from the reports of plague-eradicative measures from Los Angeles, Calif.:

Week ended June 19, 1926

Number of rats trapped	442
Number of rats found to be plague infected	0
Number of squirrels examined	1,165
Number of squirrels found to be plague infected	0
Number of mice trapped	289
Number of mice found to be plague infected	0

Date of discovery of last plague-infected rodent, Nov. 6, 1925.
Date of last human case, Jan 15, 1925.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria —For the week ended June 12, 1926, 36 States reported 1,083 cases of diphtheria. For the week ended June 13, 1925, the same States reported 1,028 cases of this disease. Ninety-seven cities situated in all parts of the country and having an aggregate population of nearly 29,750,000, reported 785 cases of diphtheria for the week ended June 12, 1926 Last year for the corresponding week they reported 645 cases. The estimated expectancy for these cities was 788 cases The estimated expectancy is based on the experience of the last nine years, excluding epidemics

Measles —Thirty-four States reported 12,985 cases of measles for the week ended June 12, 1926, and 5,603 cases of this disease for the week ended June 13, 1925 Ninety-seven cities reported 4,932 cases of measles for the week this year, and 3,190 cases last year.

Poliomyelitis.—The health officers of 37 States reported 19 cases of poliomyelitis for the week ended June 12, 1926 The same States reported 46 cases for the week ended June 13, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-six States—this year, 2,677 cases; last year, 1,819 cases; 97 cities—this year, 1,460 cases; last year, 934 cases, estimated expectancy, 759 cases.

Smallpox.—For the week ended June 12, 1926, 37 States reported 499 cases of smallpox. Last year for the corresponding week they reported 662 cases. Ninety-seven cities reported smallpox for the week as follows 1926, 95 cases, 1925, 204 cases, estimated expectancy 112 cases. Two deaths from smallpox were reported by these cities for the week this year—at Omaha, Nebr.

Typhoid fever.—Two hundred and seventy-seven cases of typhoid fever were reported for the week ended June 12, 1926, by 36 States. For the corresponding week of 1925, the same States reported 543 cases of this disease. Ninety-seven cities reported 70 cases of typhoid fever for the week this year and 149 cases for the correspond-

ing week last year. The estimated expectancy for these cities was [illegible] cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 91 cities, with a population of more than 29,000,000, as follows. 1926, 585 deaths; 1925, 578.

City reports for week ended June 12, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	1	1	0	0	0	54	1	2
New Hampshire									
Concord	22,546	0	0	0	0	0	0	0	0
Manchester	83,097	0	1	0	0	0	27	0	0
Vermont									
Barre	10,008	--------	0	--------	--------	--------	--------	--------	--------
Massachusetts									
Boston	779,620	24	49	13	3	0	93	49	21
Fall River	128,993	1	3	2	0	0	10	2	0
Springfield	142,065	5	2	0	2	2	5	6	1
Worcester	190,757	4	4	2	0	0	0	5	4
Rhode Island									
Pawtucket	69,760	3	1	0	0	0	5	0	2
Providence	267,918	0	7	4	0	1	42	0	2
Connecticut									
Bridgeport	(1)	5	5	8	0	1	13	0	0
Hartford	160,197	2	5	0	0	1	7	0	5
New Haven	178,927	10	2	0	0	0	50	1	6
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	20	10	5	0	0	33	1	18
New York	5,873,356	173	246	104	21	10	419	69	127
Rochester	316,786	5	6	22	0	1	41	3	10
Syracuse	182,003	12	5	0	0	0	341	16	1
New Jersey									
Camden	128,642	4	4	5	0	0	28	1	0
Newark	452,513	29	13	5	0	0	80	20	9
Trenton	132,020	3	3	0	0	0	27	0	2
Pennsylvania									
Philadelphia	1,979,364	48	50	74	--------	6	221	11	31
Pittsburgh	631,563	29	18	6	--------	1	187	3	22
Reading	112,707	4	2	1	--------	1	40	0	0
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	6	7	8	0	2	162	10	1
Cleveland	936,485	53	18	29	0	2	30	3	12
Columbus	279,836	7	2	27	0	0	63	1	4
Toledo	287,380	41	5	0	0	2	287	0	2

[1] No estimate made

City reports for week ended June 12, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Indiana									
Fort Wayne	97,846	9	1	0	0	0	60	0	3
Indianapolis	358,819	0	4	1	0	0	12	0	8
South Bend	80,091	2	1	1	0	0	59	0	2
Terre Haute	71,071	1	1	0	0	0	4	0	1
Illinois									
Chicago	2,995,239	154	82	74	2	4	291	23	47
Peoria	81,564	0	1	0	0	0	0	1	0
Springfield	63,923	0	1	0	1	1	5	2	0
Michigan									
Detroit	1,245,824	95	36	59	2	3	50	12	28
Flint	130,316	13	3	3	0	0	103	1	4
Grand Rapids	153,698	7	2	0	0	0	72	0	0
Wisconsin									
Kenosha	50,891	8	1	0	0	0	64	0	1
Madison	46,385	...	0	...	...	...	...	...	...
Milwaukee	509,192	79	11	11	3	3	282	28	16
Racine	67,707	1	0	1	0	0	242	13	1
Superior	39,671	0	0	0	0	0	6	0	0
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	8	1	0	0	0	91	0	0
Minneapolis	425,435	67	13	38	0	0	61	3	7
St Paul	246,001	...	14	...	...	...	...	...	...
Iowa									
Davenport	52,469	1	1	1	0	...	5	0	...
Sioux City	76,411	2	0	1	0	...	0	0	...
Waterloo	36,771	2	0	1	0	...	31	1	...
Missouri									
Kansas City	367,481	...	5	...	...	...	...	...	...
St Joseph	78,342	2	0	0	0	0	8	0	2
St Louis	821,543	7	36	62	1	1	328	4	...
North Dakota									
Fargo	26,403	...	1	...	...	...	...	...	...
Grand Forks	14,811	...	0	...	...	...	...	...	...
South Dakota									
Aberdeen	15,036	0	0	0	0	...	6	0	...
Sioux Falls	30,127	0	0	0	0	0	7	0	0
Nebraska									
Lincoln	60,941	3	1	0	0	0	0	3	2
Omaha	211,768	10	2	5	0	0	45	1	8
Kansas									
Topeka	55,411	19	1	1	0	0	10	0	0
Wichita	88,367	2	1	1	0	0	5	0	0
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	1	3	0	0	1	0	3
Maryland									
Baltimore	796,296	75	16	8	2	0	36	88	17
Cumberland	33,741	0	0	1	0	0	6	0	1
Frederick	12,035	0	0	0	0	0	0	2	1
District of Columbia									
Washington	497,906	26	7	6	1	0	136	0	7
Virginia									
Lynchburg	30,395	3	0	1	0	0	34	2	0
Norfolk	(1)	15	0	0	0	0	40	1	1
Richmond	186,403	4	1	1	0	1	118	5	3
Roanoke	58,208	2	1	0	0	0	14	0	2
West Virginia									
Charleston	49,019	1	0	1	0	0	41	0	0
Huntington	63,485	0	0	1	0	0	0	0	1
Wheeling	56,208	5	0	0	0	0	81	0	1
North Carolina									
Raleigh	30,371	9	0	2	0	0	1	0	0
Wilmington	37,061	2	0	0	0	1	3	1	2
Winston-Salem	69,031	3	0	8	0	0	16	0	0

[1] No estimate made

City reports for week ended June 12, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—con									
South Carolina									
Charleston	73,125	1	0	1	2	0	2	0	2
Columbia	41,225	7	0	0	0	0	1	2	0
Greenville	27,311	0	0	0	0	0	0	1	0
Georgia									
Atlanta	(1)	8	1	0	2	1	45	1	7
Brunswick	16,809	1	0	0	0	0	7	0	0
Savannah	93,134	0	0	0	0	0	4	0	1
Florida									
Miami	69,754	2	-------	4	1	0	14	1	3
St Petersburg	26,847	-------	0	-------	-------	0	-------	-------	0
Tampa	94,743	1	1	0	0	0	1	0	3
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	0	0	0	0	6	0	0
Louisville	305,935	3	3	1	2	1	16	0	9
Tennessee									
Memphis	174,533	6	1	3	0	1	127	0	8
Nashville	136,220	0	0	0	0	4	9	0	2
Alabama									
Birmingham	205,670	7	1	1	0	1	107	5	5
Mobile	65,955	0	1	0	0	0	0	0	0
Montgomery	46,481	0	0	0	0	0	4	2	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	1	0	0	-------	0	0	-------
Little Rock	74,216	1	0	0	0	0	25	1	0
Louisiana									
New Orleans	414,493	1	5	4	6	4	0	0	9
Shreveport	57,857	0	0	0	0	0	0	0	0
Oklahoma									
Oklahoma City	(1)	0	0	3	4	0	4	0	2
Texas									
Dallas	194,450	11	2	3	0	0	2	0	5
Galveston	48,375	0	0	0	0	0	0	0	0
Houston	164,954	0	1	2	0	0	0	0	1
San Antonio	198,069	0	1	2	0	0	2	0	5
MOUNTAIN									
Montana									
Billings	17,971	2	0	0	0	0	8	0	0
Great Falls	29,883	3	1	0	0	0	34	0	1
Helena	12,037	0	0	0	0	0	0	0	1
Missoula	12,668	0	0	0	0	0	4	1	0
Idaho									
Boise	23,042	0	0	1	0	0	3	0	0
Colorado									
Denver	280,911	33	9	5	-------	1	26	0	2
Pueblo	43,787	6	2	1	0	0	18	0	8
New Mexico									
Albuquerque	21,000	4	1	0	0	0	2	0	0
Arizona									
Phoenix	38,669	1	1	1	0	0	0	0	5
Utah									
Salt Lake City	130,948	14	3	7	0	0	8	8	2
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	29	4	7	0	-------	54	2	-------
Spokane	108,897	32	2	3	0	-------	15	0	-------
Tacoma	104,455	4	1	4	0	0	4	0	2
Oregon									
Portland	282,383	17	4	11	0	0	54	2	5
California									
Los Angeles	(1)	46	34	30	5	0	3	10	12
Sacramento	72,260	4	2	3	0	0	1	7	1
San Francisco	557,530	34	18	12	1	0	143	10	4

[1] No estimate made

City reports for week ended June 12, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	1	2	0	0	0	1	1	0	0	2	25
New Hampshire											
Concord	0	2	0	0	0	2	0	0	0	0	7
Manchester	1	6	0	0	0	1	0	0	0	0	26
Vermont											
Barre	1		0				0				
Massachusetts											
Boston	38	53	0	0	0	20	2	3	0	65	198
Fall River	2	1	0	0	0	4	1	1	0	2	37
Springfield	5	8	0	0	0	4	1	0	0	0	30
Worcester	6	12	0	0	0	4	0	1	0	2	45
Rhode Island											
Pawtucket	1	2	0	0	0	1	0	0	0	3	16
Providence	6	2	0	0	0	2	0	0	0	3	54
Connecticut											
Bridgeport	6	19	0	0	0	1	0	0	0	1	25
Hartford	3	0	0	0	0	1	0	0	0	3	
New Haven	2	7	0	0	0	2	0	2	0	2	38
MIDDLE ATLANTIC											
New York											
Buffalo	17	7	0	0	0	12	1	3	0	30	156
New York	154	213	0	1	0	[1] 105	12	6	2	66	1,330
Rochester	12	6	0	0	0	8	0	2	1	9	97
Syracuse	8	3	0	0	0	2	0	0	0	24	52
New Jersey											
Camden	3	6	0	0	0	0	0	0	0	5	24
Newark	15	29	0	0	0	8	1	0	0	37	97
Trenton	2	11	0	0	0	2	1	0	0	0	24
Pennsylvania											
Philadelphia	61	76	1	0	0	46	5	1	0	40	9 436
Pittsburgh	22	35	1	0	0	12	1	0	0	71	172
Reading	1	6	0	0	0	1	0	0	0	6	21
EAST NORTH CENTRAL											
Ohio.											
Cincinnati	8	9	2	4	0	13	1	2	0	12	120
Cleveland	17	113	2	0	0	15	1	0	0	100	188
Columbus	6	26	2	1	0	5	0	0	0	17	71
Toledo	10	18	1	0	0	10	1	1	0	51	65
Indiana											
Fort Wayne	2	10	3	1	0	0	0	1	0	6	30
Indianapolis	8	11	8	8	0	6	1	1	0	0	104
South Bend	3	8	1	0	0	1	0	0	0	2	11
Terre Haute	2	5	1	0	0	0	0	0	0	1	20
Illinois.											
Chicago	85	97	2	4	0	68	3	0	0	41	617
Peoria	2	1	0	0	0	1	0	0	0	9	14
Springfield	1	7	1	0	0	0	0	0	0	8	13
Michigan											
Detroit	57	149	4	0	0	27	3	2	0	86	329
Flint	4	21	1	0	0	3	0	0	0	8	28
Grand Rapids	4	11	0	0	0	0	1	0	0	6	18
Wisconsin											
Kenosha	1	3	1	0	0	0	0	0	0	6	11
Madison	1		1				0				
Milwaukee	19	14	6	0	0	6	0	0	0	61	127
Racine	3	0	1	0	0	0	0	0	0	15	16
Superior	1	4	2	0	0	0	1	0	0	0	5
WEST NORTH CENTRAL											
Minnesota											
Duluth	3	18	3	0	0	2	0	0	0	3	23
Minneapolis	23	74	9	0	0	5	1	0	0	4	111
St. Paul	17		4				0				

[1] Pulmonary tuberculosis only

City reports for week ended June 12, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL—continued											
Iowa											
Davenport	0	3	4	0			0	0		1	
Sioux City	1	11	2	2			0	0		2	
Waterloo	2	0	0	0			0	0		4	
Missouri											
Kansas City	5		3				1				
St Joseph	1	2	0	0	0	0	0	0	0	1	36
St Louis	22	73	3	6	0	14	3	1	1	52	193
North Dakota											
Fargo	1		0				0				
Grand Forks	1		0				0				
South Dakota											
Aberdeen	1	10	0	0			0	0		21	
Sioux Falls	1	1	0	0	0	0	0	0	0	8	2
Nebraska											
Lincoln	1	3	0	4	0	0	1	0	0	10	19
Omaha	3	70	4	5	2	0	0	0	1	1	53
Kansas											
Topeka	1	5	1	0	0	0	0	0	0	7	22
Wichita	1	0	3	0	0	0	1	1	0	12	17
SOUTH ATLANTIC											
Delaware											
Wilmington	4	2	0	0	0	1	0	0	0	2	29
Maryland											
Baltimore	18	29	1	0	0	14	3	0	0	49	195
Cumberland	0	0	0	0	0	1	0	0	0	0	15
Frederick	0	0	0	0	0	0	0	0	0	0	5
District of Columbia											
Washington	12	19	1	1	0	9	2	1	0	37	148
Virginia											
Lynchburg	0	2	1	0	0	1	0	0	0	8	10
Norfolk	1	11	0	1	0	3	1	0	0	24	
Richmond	2	16	0	1	0	3	1	2	0	4	44
Roanoke	0	0	0	1	0	1	0	0	0	0	21
West Virginia											
Charleston	1	0	0	0	0	2	0	0	0	7	14
Huntington	1	0	0	0	0	0	0	0	0	0	14
Wheeling	2	1	0	0	0	0	1	0	0	3	12
North Carolina											
Raleigh	0	0	1	0	0	0	1	0	0	8	10
Wilmington	0	0	0	1	0	0	0	0	0	5	10
Winston-Salem	0	2	2	0	0	2	1	0	0	2	15
South Carolina											
Charleston	0	1	0	1	0	2	1	0	0	5	25
Columbia	0	0	1	0	0	0	1	3	0	0	
Greenville	0	1	0	0	0	0	1	0	0	1	10
Georgia											
Atlanta	4	0	6	0	0	5	2	8	1	13	75
Brunswick	0	0	0	0	0	0	1	0	0	0	7
Savannah	0	0	0	3	0	3	1	0	0	0	33
Florida:											
Miami		0		0	0	0		2	0	7	36
St Petersburg	0		0		0	1	0		0		17
Tampa	0	1	0	11	0	0	1	0	1	0	29
EAST SOUTH CENTRAL											
Kentucky											
Covington	0	2	0	0	0	1	1	0	0	0	11
Louisville	3	0	1	0	0	4	1	1	0	3	73
Tennessee											
Memphis	2	3	1	0	0	8	2	7	0	3	
Nashville	1	0	1	1	0	6	2	1	1	1	54
Alabama											
Birmingham	1	1	5	5	0	3	2	0	0	29	65
Mobile	0	0	1	0	0	1	0	1	0	1	21
Montgomery	0	0	1	4	0	0	1	1	0	0	18

City reports for week ended June 12, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	1	0	0	--------	-------	0	0	--------	2	--------
Little Rock	1	7	1	0	0	3	1	0	0	0	--------
Louisiana											
New Orleans	3	10	2	0	0	15	3	5	0	3	130
Shreveport	0	0	1	1	0	6	1	1	1	1	29
Oklahoma											
Oklahoma City	1	0	5	0	0	4	0	1	0	0	25
Texas											
Dallas	2	2	2	1	0	8	2	3	0	11	69
Galveston	0	0	0	6	0	1	1	0	0	0	11
Houston	1	0	1	0	0	6	2	0	2	0	51
San Antonio	0	0	0	0	0	9	1	3	0	0	79
MOUNTAIN											
Montana											
Billings	1	2	1	0	0	0	0	0	0	0	4
Great Falls	2	2	2	0	0	0	1	0	0	4	14
Helena	0	0	0	0	0	0	0	0	0	0	5
Missoula	0	1	0	0	0	0	0	0	0	0	2
Idaho											
Boise	0	0	1	5	0	0	0	0	0	0	3
Colorado											
Denver	8	8	1	0	0	8	0	0	0	25	68
Pueblo	1	0	0	0	0	0	0	0	0	0	16
New Mexico											
Albuquerque	0	1	0	1	0	4	0	1	0	3	16
Arizona											
Phoenix	0	1	0	0	0	7	0	0	0	0	27
Utah											
Salt Lake City	2	0	1	0	0	2	1	1	0	62	32
Nevada											
Reno	0	0	0	0	0	0	0	0	0	0	2
PACIFIC											
Washington											
Seattle	9	12	3	0	--------	-------	1	1	--------	8	--------
Spokane	3	19	3	0	--------	-------	0	0	--------	9	--------
Tacoma	2	3	2	10	0	0	1	0	0	2	25
Oregon											
Portland	6	34	6	13	0	1	1	0	0	3	57
California											
Los Angeles	16	37	4	9	0	32	2	2	1	4	214
Sacramento	1	0	0	1	0	2	0	0	0	0	17
San Francisco	12	17	1	0	0	11	1	2	0	7	141

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis: Cases	Poliomyelitis: Deaths
NEW ENGLAND									
Massachusetts									
Boston	1	0	1	0	0	0	0	0	0
Worcester	0	0	0	0	0	0	0	1	0
MIDDLE ATLANTIC									
New York									
New York	0	1	12	4	0	0	1	1	1
Rochester	0	0	1	0	0	0	0	0	0

City reports for week ended June 12, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
MIDDLE ATLANTIC—continued									
New Jersey									
Newark	0	0	1	0	0	0	0	0	0
Pennsylvania									
Pittsburgh	0	1	0	0	0	0	1	0	0
EAST NORTH CENTRAL									
Ohio									
Columbus	0	0	0	0	0	1	0	0	0
Indiana									
Indianapolis	0	1	0	0	0	0	0	0	0
Illinois									
Chicago	1	1	3	1	0	0	0	0	0
Michigan									
Detroit	0	1	0	1	0	0	0	0	0
WEST NORTH CENTRAL									
Nebraska									
Omaha	0	0	1	1	0	0	0	0	0
SOUTH ATLANTIC									
Maryland									
Baltimore	1	0	0	0	0	0	1	0	0
South Carolina									
Charleston	0	0	0	0	0	1	0	0	0
Florida									
Miami	0	0	0	0	1	0	--------	0	0
EAST SOUTH CENTRAL									
Alabama									
Birmingham	0	0	1	0	2	0	1	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	1	0	0	0	0	1	0	0	0
Louisiana									
Shreveport	0	0	0	0	0	1	0	0	0
Texas									
Dallas	0	0	0	0	2	2	0	0	0
Houston	0	1	0	0	0	1	0	0	0
MOUNTAIN									
Montana:[1]									
Missoula	1	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Spokane	3	0	0	0	0	0	0	0	0
Oregon									
Portland	1	0	0	1	0	0	0	0	0
California									
Los Angeles	1	0	0	0	0	0	0	0	0
Sacramento	0	0	0	0	2	0	0	0	0

[1] Rocky Mountain spotted fever, 1 case at Helena, Mont

The following table gives the rates per 100,000 population for 103 cities for the five-week period ending June 12, 1926, compared with those for a like period ended June 13, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 103 cities reporting cases had an

estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926 The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926 The number of cities included in each group and the estimated aggregate populations are shown in a separate table below

Summary of weekly reports from cities, May 9 to June 12, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended									
	May 16, 1925	May 15, 1926	May 23, 1925	May 22, 1926	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926
103 cities	[2] 158	[3] 121	148	[3] 117	[4] 144	[3] 122	[5] 152	[6] 118	116	[7] 138
New England	149	87	122	78	110	80	125	[8] 79	91	[9] 69
Middle Atlantic	237	135	202	138	210	145	243	134	155	155
East North Central	[10] 102	96	101	117	100	108	92	[11] 120	89	[11] 147
West North Central	205	[3] 199	243	[3] 145	187	[3] 163	183	[3] 207	141	[12] 289
South Atlantic	81	77	83	71	[4] 72	96	[5] 88	[13] 51	54	60
East South Central	32	52	37	36	11	42	11	[14] 17	11	26
West South Central	53	82	40	47	62	65	40	56	66	47
Mountain	148	182	129	127	139	127	74	109	176	127
Pacific	[15] 132	175	157	164	160	159	138	132	157	159

MEASLES CASE RATES

103 cities	[2] 599	[3] 1,565	579	[3] 1,434	[4] 569	[3] 1,283	[5] 549	[6] 1,001	558	[7] 864
New England	1,145	1,198	1,014	1,075	836	1,064	841	[8] 736	860	[9] 662
Middle Atlantic	765	1,198	615	1,133	701	956	771	751	724	707
East North Central	[10] 795	1,371	888	1,372	839	1,252	825	[11] 1,042	779	[11] 988
West North Central	76	[3] 4,134	233	[3] 3,437	137	[3] 3,061	111	[3] 2,209	131	[12] 1,552
South Atlantic	311	1,933	309	1,659	[4] 242	1,542	[5] 393	[13] 1,244	280	1,103
East South Central	152	3,461	310	2,999	200	2,376	121	[14] 1,702	194	1,396
West South Central	13	155	22	142	13	112	22	86	13	125
Mountain	55	1,393	176	1,384	240	1,302	37	1,247	92	919
Pacific	[15] 170	679	124	693	157	803	157	696	83	593

SCARLET FEVER CASE RATES

103 cities	[2] 338	[3] 326	297	[3] 309	[4] 267	[3] 274	[5] 256	[6] 229	170	[7] 256
New England	345	312	338	288	204	258	256	[8] 251	173	[9] 250
Middle Atlantic	330	249	264	256	270	212	262	209	155	195
East North Central	[10] 368	356	388	341	321	330	293	[11] 246	198	[11] 332
West North Central	705	[3] 870	539	[3] 721	514	[3] 695	466	[3] 416	315	[12] 673
South Atlantic	156	222	138	195	[4] 115	160	[5] 125	[13] 175	58	160
East South Central	299	202	226	176	168	171	116	[14] 94	147	78
West South Central	70	155	44	172	62	116	84	163	44	86
Mountain	342	246	314	173	398	100	324	218	268	118
Pacific	[15] 187	259	155	294	133	181	144	170	155	237

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Superior, Wis , and Tacoma, Wash , not included.
[3] Grand Forks, N Dak , not included
[4] Charleston, W Va , not included
[5] Wilmington, N C , not included
[6] Concord, N H , Madison, Wis , Grand Forks, N Dak , Norfolk, Va , Wilmington, N C., and Covington, Ky , not included
[7] Barre, Vt , Madison, Wis , St Paul, Minn., Kansas City, Mo , Fargo, N Dak., and Grand Forks, N. Dak , not included
[8] Concord, N H , not included.
[9] Barre, Vt , not included
[10] Superior, Wis , not included.
[11] Madison, Wis., not included
[12] St Paul, Minn., Kansas City, Mo , Fargo, N Dak , and Grand Forks, N Dak , not included
[13] Norfolk, Va , and Wilmington, N. C , not included
[14] Covington, Ky , not included
[15] Tacoma, Wash , not included.

Summary of weekly reports from cities, May 9 to June 12, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 —Continued

SMALLPOX CASE RATES

	Week ended									
	May 16, 1925	May 15, 1926	May 23, 1925	May 22, 1926	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926
103 cities	[2] 44	[3] 26	58	[3] 18	[4] 47	[3] 19	[5] 45	[6] 15	36	[7] 17
New England	0	0	0	0	0	0	0	[8] 0	0	[9] 0
Middle Atlantic	7	0	2	0	2	1	4	0	2	0
East North Central	[10] 53	20	66	18	54	13	61	[11] 9	40	[11] 12
West North Central	76	[3] 36	66	[3] 28	68	44	92	[3] 40	50	[12] 34
South Atlantic	35	39	61	24	[4] 10	28	[5] 37	[13] 34	21	38
East South Central	173	119	401	62	389	62	105	[14] 88	273	52
West South Central	35	116	123	95	53	99	31	43	4	34
Mountain	28	55	28	18	55	36	37	27	28	46
Pacific	[15] 181	67	177	51	160	32	182	24	141	54

TYPHOID FEVER CASE RATES

	May 16, 1925	May 15, 1926	May 23, 1925	May 22, 1926	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926
103 cities	[2] 13	[3] 8	18	[3] 11	[4] 15	[3] 10	[5] 24	[6] 9	27	[7] 12
New England	12	0	24	9	17	7	29	[8] 0	24	[9] 17
Middle Atlantic	10	10	19	7	9	5	26	9	17	6
East North Central	[10] 6	5	5	5	7	9	9	[11] 5	9	[11] 4
West North Central	0	[3] 2	4	[3] 8	10	[3] 4	8	[3] 8	24	[12] 5
South Atlantic	25	4	36	32	[4] 39	26	[5] 39	[13] 34	61	26
East South Central	58	0	68	10	47	31	37	[14] 11	110	57
West South Central	75	43	62	26	62	13	84	9	110	52
Mountain	0	9	18	9	9	0	74	9	46	9
Pacific	[15] 3	8	6	19	8	11	8	8	14	13

INFLUENZA DEATH RATES

	May 16, 1925	May 15, 1926	May 23, 1925	May 22, 1926	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926
96 cities	[15] 14	16	14	15	[4] 12	12	[5] 10	[16] 8	7	[17] 10
New England	7	5	5	12	7	9	2	[8] 2	5	[9] 12
Middle Atlantic	12	17	11	16	9	11	11	6	6	9
East North Central	10	18	11	18	13	11	10	[11] 8	6	[11] 10
West North Central	11	6	17	8	17	13	4	8	8	[19] 3
South Atlantic	10	17	6	11	[4] 12	11	[5] 6	[13] 8	4	6
East South Central	74	31	79	36	37	26	47	[14] 30	16	36
West South Central	19	28	19	24	29	9	5	14	19	19
Mountain	55	18	18	0	0	9	28	18	9	0
Pacific	[15] 12	4	22	4	7	11	11	4	4	0

[2] Superior, Wis, and Tacoma, Wash, not included
[3] Grand Forks, N Dak, not included
[4] Charleston, W Va, not included
[5] Wilmington, N. C, not included
[6] Concord, N H, Madison, Wis., Grand Forks, N. Dak, Norfolk, Va, Wilmington, N C., and Covington, Ky, not included
[7] Barre, Vt, Madison, Wis, St Paul, Minn, Kansas City, Mo, Fargo, N Dak, and Grand Forks, N Dak., not included
[8] Concord, N H, not included.
[9] Barre, Vt, not included
[10] Superior, Wis, not included.
[11] Madison, Wis, not included
[12] St Paul, Minn, Kansas City, Mo, Fargo, N Dak, and Grand Forks, N Dak., not included
[13] Norfolk, Va, and Wilmington, N C, not included
[14] Covington, Ky, not included
[15] Tacoma, Wash, not included
[16] Concord, N H, Madison, Wis, Norfolk, Va. Wilmington, N C, and Covington, Ky, not included.
[17] Barre, Vt, Madison, Wis, St Paul, Minn, Kansas City, Mo, and Fargo, N Dak, not included.
[18] St Paul, Minn, Kansas City, Mo, and Fargo, N Dak, not included

Summary of weekly reports from cities, May 9 to June 12, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 — Continued

PNEUMONIA DEATH RATES

	Week ended									
	May 16, 1925	May 15, 1926	May 23, 1925	May 22, 1926	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926
96 cities	[15] 123	150	123	141	[4] 119	[4] 120	[5] 123	[18] 106	99	[17] 95
New England	129	165	110	144	110	123	69	[8] 117	113	[9] 102
Middle Atlantic	143	165	143	173	145	145	167	130	130	109
East North Central	118	147	116	133	111	106	107	[11] 99	79	[11] 87
West North Central	55	81	76	94	57	83	55	50	57	[19] 48
South Atlantic	129	182	125	148	[4] 147	[4] 111	[5] 138	[20] 83	115	96
East South Central	152	182	126	171	158	171	116	[14] 132	58	125
West South Central	106	137	73	90	73	109	63	99	82	94
Mountain	157	91	166	82	74	91	92	146	102	82
Pacific	[15] 75	92	120	53	73	64	116	67	44	67

[4] Charleston, W Va, not included
[5] Wilmington, N C, not included
[8] Concord, N H, not included
[9] Barre, Vt, not included
[11] Madison, Wis, not included
[14] Covington, Ky, not included
[15] Tacoma, Wash, not included
[17] Barre, Vt, Madison, Wis, St Paul, Minn, Kansas City, Mo and Fargo, N Dak, not included
[18] Concord, N H, Madison, Wis, Norfolk, Va, Charleston, W Va, Wilmington, N C, and Covington, Ky, not included.
[19] St Paul, Minn, Kansas City, Mo., and Fargo, N Dak, not included
[20] Norfolk, Va, Charleston, W Va, and Wilmington, N C, not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	103	96	29,944,996	30,473,129	29,251,658	29,764,201
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	14	11	2,594,962	2,634,662	2,461,380	2,499,036
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

BRAZIL

Yellow fever—Bahia—May 9–22, 1926.—During the two weeks ended May 22, 1926, three cases of yellow fever with two deaths were reported at Bahia, Brazil.

CANADA

Communicable diseases—May 30–June 12, 1926.—The Canadian Ministry of Health reports certain communicable diseases in seven Provinces of Canada for the two weeks from May 30 to June 12, 1926, as follows:

	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal fever			2	1				3
Influenza	37				2			39
Poliomyelitis				2				2
Smallpox				24	12	7	3	46
Typhoid fever	1	2	16	15	2	2	4	42

Vital statistics—Quebec—February and March, 1926.—Births and deaths in the Province of Quebec for the months of February and March, 1926, have been reported as follows:

	February	March
Estimated population	2,570,000	2,570,000
Births	6,167	7,526
Birth rate per 1,000 population	28.79	35.11
Deaths (all causes)	2,813	3,559
Death rate per 1,000 population	13.13	16.61
Deaths under 1 year	887	1,113
Infant-mortality rate	143.8	147.9
Deaths from—		
Cancer	115	130
Cerebrospinal meningitis	19	11
Diabetes	9	21
Diphtheria	24	26
Heart diseases	323	431
Influenza	135	198
Measles	19	31
Poliomyelitis (infantile paralysis)	1	0
Scarlet fever	9	14
Syphilis	5	7
Tuberculosis (pulmonary)	191	236
Tuberculosis (other forms)		93
Typhoid fever	15	20
Whooping cough	31	38

CHINA

Plague—Amoy—May 1, 1926.—Under date of May 1, 1926, plague was reported prevalent in the city of Amoy, China.

Smallpox—South Manchuria Railway—May 16–22, 1926.—During the week ended May 22, 1926, 18 cases of smallpox were reported at 10 localities on the line of the South Manchuria Railway.

EGYPT

Plague—May 21–27, 1926—Summary—During the week ended May 27, 1926, 4 cases of plague were reported in Egypt, the urban occurrence being 2 cases at Suez. From January 1 to May 27, 1926, a total of 43 cases was reported in Egypt, as compared with 53 cases occurring during the corresponding period of the preceding year.

Later occurrence—Later reports show the occurrence of plague in Egypt as follows: Suez, May 28 to 30, 4 cases with 3 deaths (bubonic and pneumonic); Provinces of Beni-Suef, May 28 to June 3, 5 cases with 2 deaths; and Gharbieh, June 2, 1 case with 1 death (bubonic).

GREECE

Plague—Zante—May 17, 1926.—A press report has been received from Patras, Greece, under date of May 23, 1926, showing the occurrence of a case of plague in the island of Zante, six hours distant from Patras, May 17, 1926.

IRELAND (IRISH FREE STATE)

Typhus fever—Cork County.—A case of typhus fever was reported in the urban district, Cork County, Irish Free State, June 5, 1926.

MALTA

Communicable diseases—April, 1926.—During the month of April, 1926, communicable diseases were reported in the island of Malta as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Broncho-pneumonia	5		Pneumonia	7	
Chicken pox	64		Poliomyelitis	1	
Diphtheria	7	1	Scarlet fever	3	
Erysipelas	6		Trachoma	34	
Influenza	12		Tuberculosis	23	17
Lethargic encephalitis	1		Typhoid fever	15	2
Malta (undulant) fever	48		Whooping cough	20	
Measles	120	1			

Population, estimated, civil, December 31, 1925, 255,242.

MEXICO

Malaria—Tampico—June 1-10, 1926.—During the 10 days ended June 10, 1926, 8 cases of malaria with 3 deaths were reported at Tampico, Mexico.

PERU

Gastroenteritis—Lima—March, 1926.—During the month of March, 1926, 75 deaths from gastroenteritis were reported at Lima, Peru. Population, estimated, 200,000.

SPAIN

Mortality—Madrid—April, 1926.—During the month of April, 1926, 1,333 deaths were reported at Madrid, Spain, as compared with 1,628 deaths in January, 1,248 in February, and 1,584 in March, 1926 Population, estimated, 766,552.

Mortality in children—Of the 1,333 deaths reported in April, 1926, at Madrid, 177 occurred in children under one year of age and 262 in the period one year to four years.

Principal causes of death.—The principal causes of death noted were heart disease with 98 deaths; tuberculosis (pulmonary), 147; pneumonia, 25; bronchitis, 109, other diseases of the respiratory organs, 203. There were 65 deaths from scarlet fever, including 4 deaths from scarlatina and 5 deaths from typhoid fever.

VIRGIN ISLANDS

Communicable diseases—May, 1926.—During the month of May, 1926, communicable diseases were reported in the Virgin Islands of the United States as follows

Island and disease	Cases	Remarks
St Thomas and St John		
Chancroid	3	
Gonorrhea	7	
Syphilis	3	
Tetanus	1	
Tuberculosis	1	Chronic pulmonary.
St Croix		
Chancroid	4	
Filariasis	3	Bancrofti.
Gonorrhea	1	
Leprosy	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week ended July 2, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
India				
Calcutta	Apr 4-May 8	308	276	
Indo-China				
Saigon	May 2-8	20	18	
Siam				
Bangkok	do	255	143	

PLAGUE

Place	Date	Cases	Deaths	Remarks
China				
Amoy	Apr 18-May 1, 1926			Prevalent
Nanking	May 9-22			Do
Egypt				May 21-27, 1926 Cases, 4. Jan 1-May 27, 1926 Cases, 43 Corresponding period, 1925 Cases, 53
City—				
Suez	May 21-27	2		
Do	May 28-30	4	3	Bubonic, 1 case, 2 deaths, 1 case, 1 death, pneumonic
Province—				
Beni-suef	May 28-June 3	5	2	Bubonic and septicemic
Gharbieh	June 2	1	1	Bubonic
Greece				
Athens	Apr 1-30	7	2	Including Piraeus
Do	May 1-31	9	2	Do
Zante	May 17	1		
India				
Bombay	May 2-8	1	1	
Iraq				
Bagdad	Apr 18-May 15	83	56	
Java				
Batavia	Apr 24-May 7	21	21	
Cheribon	Apr 11-24	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-31	4		
Brazil				
Para	May 16-29	6	7	
Rio de Janeiro	May 2-15	45	11	
Santos	Mar 1-7		1	
Canada				May 30-June 12, 1926 Cases, 46.
Alberta	May 29-June 12	3		
Manitoba	do	12		
Winnipeg	June 6-12	5	1	
Ontario				May 30-June 12, 1926 Cases, 24
Kingston	May 23-29	3		
North Bay	May 2-22	5		
Saskatchewan				May 30-June 12, 1926 Cases, 7.
China				
Chungking	May 2-15			Present.
Foochow	May 9-22			Do
Hongkong	May 2-15	4	3	
Manchuria—				
An-shan	May 16-22	1		South Manchuria Ry
Antung	do	2		Do
Changchun	do	2		Do
Fushun	do	3		Do
Kai-yuan	do	1		Do
Liao-yang	do	2		Do
Mukden	do	1		Do
Penhsihu	do	2		Do
Teshihchiao	do	1		Do
Wa-feng tien	do	3		Do

[1] From medical officers of the Public Health Service, American consuls, and other sources For reports received from Dec 26, 1925, to June 25, 1926, see Public Health Reports for June 25, 1926 The tables of epidemic diseases are terminated semiannually and new tables begun.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended July 2, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Nanking	May 8-22			Present
Shanghai	May 2-15	2	5	Cases, foreign. Deaths, population of international concession, foreign and native.
Swatow	May 9-15			Sporadic
Great Britain				
England—				
Bradford	May 23-29	1		
India				
Bombay	May 2-8	24	12	
Calcutta	Apr 4-May 8	133	128	
Iraq				
Bagdad	May 9-15	1		
Basra	Apr 18-May 8	9	4	
Japan				
Nagoya	May 16-22		1	
Taiwan Island	May 11-20	24		
Yokohama	May 2-8	2		
Java				
East Java and Madoera	Apr 11-17	4		
Malang	Apr 4-10	6	1	Interior
Mexico				
Guadalajara	June 8-14		2	
Mexico City	May 16-22	2		Including municipalities in Federal District
Tampico	June 1-10		2	Varioloid
Torreon	May 1-31		10	
Poland				Apr 4-10, 1926 Cases, 7
Portugal				
Oporto	May 23-29	3		
Siam				
Bangkok	May 2-8	1	4	
Union of South Africa:				
Transvaal—				
Johannesburg	May 9-15	1		

TYPHUS FEVER

Algeria				
Algiers	May 21-31	2	1	
Chile				
Antofagasta	May 23-29	3		
Ireland (Irish Free State)				
Cork	June 5	1		
Mexico				
Mexico City	May 16-22	9		Including municipalities in Federal District
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces
Peru				
Arequipa	Jan 1-31		2	Out of date
Poland				Mar 28-Apr. 10, 1926 Cases, 191, deaths, 18

YELLOW FEVER

Brazil				
Bahia	May 9-22	3	2	

X

TREASURY DEPARTMENT

PUBLIC HEALTH REPORTS

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BY THE UNITED STATES PUBLIC HEALTH SERVICE

VOLUME 41 :: :: NUMBER 28

JULY 9 - - - 1926

SPECIAL ARTICLES

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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen B J LLOYD, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912

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CONTENTS

PUBLIC HEALTH REPORTS

VOL. 41 JULY 9, 1926 NO. 28

HEREDITARY TRANSMISSION OF TULARÆMIA INFECTION BY THE WOOD TICK, *DERMACENTOR ANDERSONI* STILES[1]

By R R PARKER, Special Expert, and R R SPENCER, Surgeon, United States Public Health Service

In May 1924, Parker, Spencer, and Francis[2] submitted data demonstrating the stage to stage transmission of *Bacterium tularense* from larva to adult of the wood tick *Dermacentor andersoni* Stiles. New data, here presented, demonstrate the hereditary transmission of this bacterium from infected female ticks to their progeny

The ticks used in these experiments were part of a lot of laboratory-reared adult ticks, all of them the progeny of one female and free from any demonstrable infection as shown by tests of the antecedent larvae and nymphs and the apparent absence of disease in the hosts upon which they were engorged The strain of tularæmia employed was the same as that used in the previous studies[2] and had been carried in part in ticks and in part by guinea pig transfers since it was secured in May, 1923, from wild adult ticks. The experimental studies were made at the Rocky Mountain Spotted Fever and Tularæmia Laboratory of the United States Public Health Service at Hamilton, Mont

Feeding and infection of parent females.—On May 22, 1924, two Belgian rabbits were each infested with 23 (some male and some female) ticks confined in a brass gauze capsule secured in place by adhesive plaster The rabbits were immediately inoculated by the cutaneous method with spleen tissue of a guinea pig just dead of tularæmia Both hosts were dead of typical tularæmia on May 27, and four engorged female ticks were recovered and put aside. The remaining ticks were at once transferred to two normal rabbits, from which they were removed on June 2, and 11 more engorged females were secured, making a total of 15. The latter two host rabbits died June 13 and 14, respectively, with lesions suggestive of subacute tularæmia. Each of the fed female ticks deposited fertile eggs.

Feeding of resultant larvae, nymphs, and adults.—The 15 lots of larvae were fed, each on a separate Belgian rabbit, at various dates between August 8 and September 15. Five lots failed to engorge;

[1] The experimental studies upon which this paper is based were made in cooperation with the Montana State Board of Entomology

[2] Tularæmia XI. Tularæmia Infection in Ticks of the species *Dermacentor andersoni* Stiles in the Bitterroot Valley, Montana. Pub Health Rep, Vol 39, No 19, May 9, 1924, pp 1057-1073

DISCUSSION

The results of the experiments recorded above demonstrate the hereditary transmission of *Bacterium tularense* in the intermediate host, *Dermacentor andersoni*. Eight of 15 female ticks engorged on infected hosts transmitted infection to their progeny. In two of the eight positive lines of descent, however, infection was recovered only from the eggs and was not demonstrated in the resultant larvae or nymphs.[3] In the other six (in only three of which was egg infection demonstrated) it was recovered from the larvae or nymphs or both. In no one line of descent was it recovered from all three of these stages. Four of the five lots of eggs that gave positive tests caused typical acute infections in the egg-injected guinea pigs. Only one lot of larvae and but one of nymphs, however, caused typical acute death of their hosts. Both were from the same parent. In all other positive tests, tissue transfers from the host animals or from the egg-injected or tick-injected guinea pigs (which were apparently well when killed and autopsied) were necessary in order that the presence or apparent absence of infection might be established.

The results, as stated, suggest (1) That not all infected females transmit infection to their progeny; (2) that the virulence of infection so transmitted may vary in the progeny of different females, even though all were infected from a common source, and (3) that in some lines of descent the infection may die out. The same apparent tendencies have been noted in the much more extensive studies of the virus of Rocky Mountain spotted fever in the same tick species.

The fact that in each line of descent not all stages were shown infective and that many of the positive tests were apparent only after one or more transfers from the initial test guinea pigs indicates the inadvisability of placing undue reliance on apparently negative tests.

The apparent failure to recover infection from the three lots of adults shown to have been infective as nymphs does not necessarily indicate absence of the infectious agent, but even if the agent were absent, the finding would not detract from the significance of the positive results secured with eggs, larvae, and nymphs. The data justify the conclusion that hereditary transmission occurs, but do not warrant any deduction as to the percentage of infected females that thus transmit the bacterium or as to how far it will persist in the subsequent stages. These points doubtless are determined by the conditions attendant upon any particular test.

The hereditary transmission of *Bacterium tularense* by *Dermacentor andersoni* is of interest for two reasons (1) Hereditary transmission

[3] Prior to recorded experiments infection in the eggs had been demonstrated in lots from several females which had been infected as larvae. The tests were not carried further.

of the bacterium assures a greater number of infected ticks in nature than if stage to stage transmission were confined within the limits of a single generation, and it therefore becomes significant as a definite aid in the natural maintenance of infection; (2) although the hereditary transmission of certain protozoa, of some species of rickettsiae and of symbiotic microorganisms by insects or arachnids is a recognized phenomenon, this paper is believed to be the first record of similar transmission of a known bacterium.

THE SUSCEPTIBILITY OF THE COYOTE (*Canis lestes*) TO TULARÆMIA[1]

By R R PARKER, Special Expert, United States Public Health Service, and EDWARD FRANCIS, Surgeon, United States Public Health Service

In June, 1925, Dr J H Garberson, of Miles City, Mont., reported a case of tularæmia, apparently caused by the bite of a coyote (*Canis lestes*). The patient, D S, was bitten on the hand, June 13, by one of five coyote pups which he was removing from their den, close to the Musselshell River, about 2 miles southeast of Melstone Typical onset of tularæmia occurred June 15 A persistent ulcer at the site of the coyote bite and enlarged axillary glands characterized this illness The patient gave no history of tick bite or of having handled rabbits or of any other probable source of infection other than the coyote bite. Blood serum collected from the patient June 27, 1925, and forwarded to the Hygienic Laboratory of the Public Health Service at Washington, D C., was tested by Francis, and found to agglutinate *Bacterium tularense* in all dilutions from 1:10 to 1:640, thus confirming the diagnosis of tularæmia. Numerous rabbit bones were noted near the den, and rabbits seen in the vicinity were sluggish. One of the coyote pups died four days after capture, but the patient did not know whether or not this was the one that had bitten him The remainder of the litter were killed two weeks later.

Because the evidence so strongly favored the coyote as the infecting agency, the question arose whether the bite was infective because of acute tularæmia infection in the coyote itself or because the latter had eaten an infected wild rabbit or other infectious material shortly before biting, the resulting transfer of infection having been purely mechanical The desirability of testing the susceptibility of coyotes was thus suggested. This was made possible by the cooperation of Doctor Garberson, through whom three coyote pups were secured. The experiments were carried on at the Rocky Mountain Spotted Fever and Tularæmia Laboratory of the Public Health Service at Hamilton, Mont.

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The tests were made by feeding the coyotes the flesh of Belgian rabbits and guinea pigs just dead of acute tularæmia This method of giving infectious material was used because it simulated the most likely natural means by which coyotes might acquire the infection. Rodents, especially rabbits, are an important item in coyote diet, and tularæmia was known to be prevalent among rabbits in the locality in which this case occurred All three coyotes died of acute infection, the specific nature of which was indicated by agglutination tests made before and after the first infective feed, by the occurrence of typical infection in guinea pigs inoculated with tissue obtained at autopsy, and by the recovery from these guinea pigs of pure cultures of *Bacterium tularense* The agglutination and cultural tests were made by Francis, to whom the necessary sera and tissues were forwarded

At the times the tests were begun the coyotes (A, B, and C) were approximately four and one-half, five, and six months old, respectively.

COYOTE A

Blood serum secured from coyote A on July 21 failed in all dilutions to agglutinate *Bacterium tularense*

Between July 29 and August 21 this coyote was fed the spleens and livers of eight Belgian rabbits and five guinea pigs and the entire carcasses of two other guinea pigs. All of these animals had died of acute tularæmia.

Serum drawn August 6 did not agglutinate *Bacterium tularense*. On August 17 it agglutinated in all dilutions up to 1 40; on August 27. in all dilutions up to 1:80, and on September 4, in dilutions of 1:10 and 1 : 20

Death occurred September 20, 53 days after the first infective feed. The carcass was packed in ice and autopsy was made September 21. Parts of the following tissues were emulsified in salt solution and guinea pigs were injected subcutaneously with each, respectively. Salivary glands, axillary glands, inguinal glands, spleen, and lungs. The guinea pig injected with salivary-gland emulsion died September 28, the pigs injected with axillary-gland and spleen emulsions died September 30. Necropsy findings in all three were typical of acute tularæmia. The remaining tests were negative. The infection in the guinea pig injected with salivary-gland emulsion remained typical throughout a series of seven guinea-pig transfers, from one of which a pure culture of *Bacterium tularense* was isolated.

COYOTE B

Serum drawn September 8 did not agglutinate *Bacterium tularense*.

Coyote B was fed the carcasses of four Belgian rabbits dead of typical tularæmia, the carcasses of two being fed on September 9, and of one each on September 11 and 14.

On September 18, nine days after the first infective feed, the serum of this coyote agglutinated *Bacterium tularense* in dilutions up to 1 : 320 and partially at 1 : 640, on September 28 agglutination was positive in all dilutions up to 1 : 320.

Coyote B died October 1, 22 days after this first infective feed. Autopsy was performed immediately after death, but no lesions typical of tularæmia were found. Parts of the following tissues were emulsified in salt solution and guinea pigs were inoculated subcutaneously, with each emulsion, respectively· Salivary glands, axillary glands, inguinal glands, spleen, and liver. The guinea pig inoculated with salivary-gland emulsion died typically on October 10 The lesions remained typical through a series of six guinea-pig transfers, from one of which a pure culture of *Bacterium tularense* was recovered. The other tests were negative.

COYOTE C

Serum of coyote C taken September 4 and again October 13 failed in all dilutions to agglutinate *Bacterium tularense*.

Coyote C was fed one Belgian rabbit on October 18 and two guinea pigs on October 20 and again on October 22, all having just died of typical tularæmia

On October 23 the blood serum failed to agglutinate *Bacterium tularense* in all dilutions; on October 30 it agglutinated in dilutions of 1 : 10, 20, 40, and 80.

The coyote was killed when dying, October 31, 13 days after the first infective feed. No characteristic lesions of tularæmia were found at autopsy. The left prescapular gland showed a condition at one extremity suggestive of beginning abscess formation. Parts of the following tissues were emulsified in salt solution and two groups of guinea pigs were inoculated with each emulsion, one group subcutaneously, the other intraperitoneally. Salivary glands, prescapular glands, axillary and retroscapular glands, inguinal glands, spleen, and liver. Two guinea pigs were also inoculated with heart blood. Only the two inoculated with the emulsion of the prescapular glands showed evidence of infection. Both died typically, one November 5 the other November 8. The lesions remained characteristic in a series of four guinea-pig transfers, from one of which a pure culture of *Bacterium tularense* was secured.

SUMMARY AND DISCUSSION

Three young coyotes, 4 to 6 months of age, were infected with acute tularæmia by feeding them the tissues of Belgian rabbits and guinea pigs just dead of typical infections. Death occurred respectively, 53, 22, and 13 days after the first feed of infectious material. The course of infection in each case was attended by loss of appetite,

and by an increasing weakness and emaciation. At autopsy the tissues showed no gross pathological lesions such as are characteristic of acute tularæmia in laboratory animals. Diagnosis was made by the following findings (*a*) The coyote sera did not show specific agglutinating properties for *Bacterium tularense* before the first feed of infectious material, but did give specific reactions beginning the second week thereafter; (*b*) typical acute tularæmia infection was produced in guinea pigs injected with emulsions of autopsy material from each coyote; and (*c*) pure cultures of *Bacterium tularense* were isolated from the tissues of guinea pigs in which the infection from the coyotes was propagated.

The recovery of typical tularæmia from the salivary glands of two of the experimental coyotes indicates the possibility of human infection by the bite of an infected coyote. Besides the case noted as evidently due to this cause, another case reported by Dr C. T. Pigot, of Roundup, Mont., also in 1925, was apparently infected by the bite of a ground squirrel (*Citellus richardsoni*).

These data are of especial interest as indicating a hitherto unsuspected avenue for the transfer of tularæmia infection from its normal hosts to man; namely, by the bite of a wild rodent or carnivore.

The susceptibility of coyotes and the evident possibility of fatal infection suggest that tularæmia may be a factor, at least, in the diminution of the abundance of coyotes which is so frequently noted following the decimation of rabbit populations in the same localities.

BENZOL POISONING AS AN INDUSTRIAL HAZARD

Review of studies conducted in cooperation with the Subcommittee on Benzol of the Committee on Industrial Poisoning of the National Safety Council

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III. PREVIOUS STUDIES OF CHRONIC BENZOL POISONING

Whereas in acute benzol poisoning, the history, the onset, and the course of symptoms lead readily to a diagnosis, in chronic benzol poisoning we find a wholly different picture. The onset is insidious, the early symptoms are generally overlooked, and it is not until the condition becomes relatively grave that it receives medical attention. In 1897, Santesson (45) reported his now famous cases of chronic benzene poisoning. In the tire department of a rubber factory in Upsala, nine young women using benzene cement were taken ill with rather odd symptoms of headache, dizziness, weakness, and hemorrhages of the mucous membranes. Purpuric spots on the skin, bleeding from the nose and gums, vomiting of blood, and bleeding from the vagina were among the more startling features. Various

degrees of anemia were present with the red cell count markedly depressed, in one case down to 600,000 per cubic millimeter, and with the hemoglobin reduced to 20 per cent. Of these cases, four proved fatal within one to four months from the beginning of exposure. Shortly after Santesson's report, Lenoir and Claude (46) reported a fatal case of benzol poisoning in a workman who had been employed for several years in a dyehouse where benzene was used In due time, weakness and loss in weight resulted, then the appearance of bleeding from the nose and gums Later purpuric spots appeared on the skin and the general condition progressively became more grave until the man suddenly died. On autopsy, hemorrhages in the gastric mucosa, in the intestines, and under the endocardium were discovered. Myocardial infarcts were also found. The recognition of the symptoms as a distinct entity due to the effects of benzene, led Oliver (47) to stress the benzene hazard, to outline the general symptomatology of the disease, and to recommend hygienic instructions as to its prevention in industry.

Selling (48), in 1910, was the first to report cases of chronic benzol poisoning in the United States. Of the three cases recorded, two terminated fatally These cases occurred among the workers in the coating room of a tin-can plant in Baltimore, Md. Fourteen young girls were employed in this workroom. Their duties consisted in operating the coating machines, and in handling the tin can ends after a thin layer of rubber dissolved in benzol had been applied to the margin of the can end. In this process, the ends, after emerging from the machine, are still warm, and under such conditions the benzol continues to evaporate into the room air. The concentration of benzol in the air was apparently sufficient to produce fatal poisoning in this case In Selling's report he states that 10 gallons of benzol were used each day, and that the room was provided with excellent natural ventilation, the windows being kept wide open. These facts are interesting in that they suggest the subtle influence of benzol, despite precautions that may be taken to obviate this hazard. The essential features of Selling's cases are as follows:

Case 1—White female, age 14 Doctor Girdwood was treating her mother for pneumonia and his attention was called to the girl by her pallor and the presence of purpuric spots She was feeling well, but shortly after had hemorrhages from the nose and mouth and was advised to enter the hospital She dated the onset of her illness at about a month before admission, when she noticed blue spots on her arms and legs. Shortly after these had appeared, she suffered bleeding from the nose, gums, and throat For the week prior to admission, she had been confined to bed because of weakness and dizziness. No joint pains or gastrointestinal symptoms were present. On examination the patient showed pallor, pale membranes, bluish macules 1–3 mm scattered over arms, legs, and trunk, and bleeding from the gums Ophthalmoscopic examination showed moderate neuro-retinal edema, with pale fundi and great numbers of small hemorrhages The blood count on admission showed red cells 1,090,000 per c. mm. and white blood cells

1,280 per c mm., with 28 per cent of hemoglobin (Sahli) The red cells were smaller than usual and pale and moderate anisocytosis (variation in size of cells) was present Marked leucopenia (deficiency in white blood cells) with a predominance of mononuclear forms was found The platelets were much reduced The girl died eight days after entry The autopsy revealed muscles of a deep red color; blood pale and watery The heart muscle and, to a less extent, the liver, showed fatty degeneration The anatomical diagnosis was purpura hemorrhagica (probably toxic); hemorrhages into the skin, viscera, and serous surfaces Pallor of the organs

Case 2.—White female, age 14 years She complained of spots on body and pain in the side The general history and physical signs were almost identical with those of Case 1. She had been working five months The blood showed 2,100,000 red cells and 560 white cells per c mm, with a preponderance of mononuclears, and hemoglobin 37 per cent The case proved fatal The anatomical diagnosis on autopsy was purpura hemorrhagica, hemorrhages in the skin, viscera, and serous surfaces, pallor of the organs, hyperplasia of the bone marrow, acute pleurisy

Case 3.—Female, age 14, working for three months in the coating room Presented symptoms of anorexia, abdominal pain, vomiting and headache, with fainting spells. Red cells, 4,900,000, W B C, 4,400 per c mm, Hb, 54 per cent This patient recovered and was discharged after six days An examination of the other workers in the coating room revealed four more who had purpuric spots, but they were entirely free from other symptoms

Selling (48) stresses the fact that benzene is a powerful leucotoxin, destroying the white cells of the blood and attacking the entire hematopoietic or blood-forming system in general In 1911 two similar cases (49) were reported of chronic benzene poisoning characterized by purpura hemorrhagica and anemia, and occurring in a rubber works. The same year Glaser (50) reported on an investigation into several cases of benzene-vapor poisoning occurring in a can factory. Fourteen girls were examined and all were found to be anemic. Four had to be removed to a hospital, where one died and one was critically ill. In these cases the presence of anilin and nitrobenzol complicated the picture and was held responsible for the sickness In 1916 McClure (51) emphasized the value of treatment by repeated transfusions and reported a case occurring in the same can factory as that in which the cases reported by Selling occurred. A woman 31 years of age complained of bleeding from the nose and mouth, the appearance of black and blue spots on her body, and also weakness and anorexia. Extreme breathlessness, with anemia, developed later. The red cell count was 1,460,000 and the white cells 1,110 per c. mm.; hemoglobin, 25 per cent. Bleeding time was 14½ minutes. Thirteen successive transfusions were given, and although the first three or four did not produce any definite improvement, the persistent administration of blood led finally to her uneventful recovery and discharge. In his paper McClure also advocates splenectomy in some of the cases of persistent anemia. Numerous other cases of chronic benzene poisoning in can factories are on record. Hogan and

Shrader (52) report three cases of chronic poisoning occurring in young women and resulting in two fatalities As in the previous cases, the workers were engaged in tending the machines in which rubber cement was sprayed around the margin of the can ends. The evaporation of the benzol in the poorly ventilated room was again the cause of the fatalities. The symptoms and signs presented were almost identical with Selling's cases They are briefly presented below

Case 1 —Young girl of 17 years Had been working six weeks in the "dope room" inspecting the tops and bottoms of cans On March 4 she felt weak and had no appetite Later she developed headache and noticed blue spots on her arms and legs On March 14 she experienced difficulty in swallowing food, had a sore mouth, and also spat up blood Examination showed undernourishment, anemia, purpuric spots over arms and legs, stomatitis, and bleeding from the vagina Marked anemia was present. R B C, 1,240 000, W B C, 600 per c mm, Hb 39 Anisocytosis and poikilocytosis were present She was transfused shortly after admission to the hospital, but grew weaker and died

Case 2 —A woman of 25, admitted with a diagnosis of placenta previa. An attempt was made to deliver her and a macerated fetus was obtained Her history is not clear Blood examination showed R B C, 470,000 per c mm; W. B. C., 538 per c mm; Hb 19 per cent

Case 3 —Young girl of 15, employed in a can factory, working on can tops Three days after starting work she had a nosebleed, and a week later hemorrhages from the mucous membranes, loss of appetite, and later persistent bleeding from the vagina Nausea, vomiting, poor sleep, and extreme fatigue were also present. She was admitted to the hospital April 9 On April 12 her blood count showed 880,000 red cells and 950 white cells per c mm, with a preponderance of mononuclear forms. Hb, 16 per cent She was given three transfusions. Immediately favorable response resulted and six days later her blood count showed 2,184,000 red cells and 3,050 white cells per c mm, with 44 per cent hemoglobin The total mononuclear count had decreased from 60 per cent to 48 per cent, and the polynuclear elements had increased from 38 per cent to 50 per cent

These cases emphasize the marked susceptibility of young girls to chronic benzene poisoning and also indicate the rapid onset of grave symptoms Dr. Alice Hamilton (53) cites, from a personal communication, the case of a woman, aged 41, working in a can factory where cans to which covers had been cemented on with a benzol paste were being delivered. Despite downward suction ventilation and a fresh air supply from above, this patient developed headache, nausea, bleeding from the nose and gums, with a rash and purpura over the lower extremities. Her blood count showed 2,512,000 red cells and 2,000 white cells per c. mm. Hemoglobin, 35 per cent. The case proved fatal, although two blood transfusions were given.

Legge (54), in 1918, reported the first known cases of chronic benzol poisoning occurring in Great Britain. Two men were employed in spreading rubber cement on balloon fabric. In September, 1917, the men were transferred to a new spreading room where 20 spreading machines had been installed, but of which only three were in use,

two of them being operated by the men whose cases are under discussion. The composition used was a mixture of rubber dissolved in pure benzol After the lapse of approximately three months there appeared symptoms of malaise and anemia, with subcutaneous and submucous hemorrhages, bleeding from the nose, gums, and bowels The first man stopped work on December 11, 1917, and died December 18, 1917, the second stopped work on December 13, 1917, and at the time of Legge's report he was still seriously ill in hospital An autopsy on the man who died showed submucous hemorrhages in the intestinal tract and under the endothelium of the heart The bone marrow exhibited the characteristic changes of an aplastic anemia. About six months later the remaining worker, who was employed on the third machine, became ill with typical symptoms of chronic benzene poisoning and died The workroom in which these men had been employed was a partitioned area of a larger spreading room. Its dimensions were 12 feet long by 12 feet wide and 11 feet high. It had four windows on one side and two on the other None of the workers in the main spreading room showed any signs of poisoning. Analysis of the air in the partitioned workroom showed benzol concentrations of 210 to 1,050 parts per million by volume, with an average of 550 parts. Doctor Dale, of the Medical Research Committee, advocated the substitution of xylol in place of benzol as the solvent, believing it to be considerably less toxic. Returning to America, we find Harrington (34), in 1917, reporting five cases of chronic poisoning, with three deaths, in the tire-building department of a rubber establishment. Preparatory to vulcanizing, the tires were wiped with a cloth which was moistened with benzol by means of a can so arranged as to deliver a specified amount of benzol on the cloth. This process of moistening the cloth occurred about eighteen times a day. The cases are briefly recorded below

Case 1—Fatal. Male 33 years old Had been in the tire-building department for about a year when his gums started to bleed almost daily. Shortly after this, bluish spots appeared on his body and extremities Nosebleed, extreme weakness, and dyspnea soon appeared and he entered the hospital about five weeks after the onset of symptoms Examination revealed spongy, bleeding gums, pale membranes, slight tremor of head, ecchymotic spots on skin Vertigo and visual disturbances were also evident R B C, 2,288,000, W. B C, 5,000; Hb, 60 per cent. A blood transfusion was given but the symptoms grew progressively worse; delirium and convulsions then appeared, followed shortly by death

Case 2—Fatal Male, 40 years old. Had been working in tire-building department for 11 or 12 months Several months before entering the hospital he became aware of increasing weakness, fatigue, and dyspnea. He began to lose weight, had frequent headaches, and was unable to work continuously He developed uncontrollable nosebleed and finally had to give up work because of the epistaxis, weakness, and dizziness Hospital examination revealed pallor, pale membranes, ulceration and a bleeding spot in the nose, spongy bleeding gums, and ecchymotic spots on the extremities. Palpitation and vertigo were

also present. R B C, 3,400,000, W. B C, 10.000, Hb, 65 per cent Bleeding of the nose was frequent, twitching of head and limbs developed with later paralysis; then delirium, Cheyne-Stokes breathing, and loss of sphincter control appeared, the patient finally lapsing into coma and death

Case 3—Fatal Male, 30 years of age Since 1915 had been working in the tire-building department Late in 1915 he noticed red spots on the face and neck In spring of 1916 he began to feel weak and had headaches and dizzy spells He consulted a physician, whose report disclosed pallor, general weakness, loss in weight, dyspnea, palpitation, weak gait, headache, dizziness, tinnitis, low red and white blood cell counts Two months later he had severe nosebleed with aggravation of all his past symptoms Entered the hospital two weeks later because of uncontrollable nosebleed Evidences of ecchymoses on legs were then present R B C, 2,136,000; W B C, 2,000, Hb, 40 per cent, total mononuclears, 69 per cent, polynuclears, 29 per cent Developed acute lobar pneumonia Autopsy report Acute lobar pneumonia, pulmonary edema, anemia, exhaustion consequent on poisoning by benzol

In addition, Harrington reports several nonfatal cases, one of a tire builder who developed a papular eruption on arms, feet, ears, and neck Blebs then formed, accompanied by fever and itching. This patient stated that 16 or 18 other workers among the 120 employed in that department suffered from similar lesions These local symptoms disappeared on the substitution of naphtha for benzol. In the Bulletin of the New York State Industrial Commission (55) two fatal cases are reported in men who were employed in the coating of fabrikoid with a rubber mixture dissolved in benzol. The benzol fumes escaped from the hot rubber-coated fabric which readily dried as it emerged from the spreader. The symptoms were those typical of chronic benzol poisoning. The first case was that of a man who had been working for about nine months when he noticed that he was bleeding from the gums and had red spots on his legs. Shortly afterwards he had severe nosebleed, which became more frequent. He entered the hospital and died about two weeks later The second man had been working only for about five months. He had not been feeling well and one night he had a severe nosebleed with bleeding from the gums. His temperature rose to 104°F. The symptoms continued until he died. During a subsequent controversy which arose, it was asserted that the company had been negligent in not attempting to remove the fumes, as even before the mishap some complaint had been made regarding the ventilation. It was brought out that the other men in the coating room were subject to relatively frequent nosebleeds, but that still others had been employed in the coating room for 15 years without suffering any bad effects. Tests were made of the room air in the vicinity of the coating machines, and the highest concentration found was less than 5 per cent of benzol.

Newton (56) reports some interesting cases of early poisoning in his study of industrial poisons during the war. He cites the cases of three chemists who were exposed to benzene vapor for periods approx-

imating two weeks The first case, aged 30, had been intensively exposed for about two weeks and complained of headache, loss of appetite, lassitude, and loss of weight Sudden abdominal pain, with nausea and vomiting, developed. Physical examination was negative A leucopenia of 1,200 white cells per c mm was present. He states that the intoxication in this case was largely from inhalation. The condition, including the leucopenia, was entirely cleared up after a month's leave of absence The second case was that of a chemist exposed for about two weeks, who showed a leucopenia of 1,250 white cells per c. mm. but complained of no symptoms Continuing with his work, but with hygienic instructions, the white count rose to 3,200 per c. mm. within a month. The third case was that of a chemist, similarly exposed for about two weeks, who presented a leucopenia of 1,700, with a red cell count of 3,680,000 per c mm. Allowed to continue with his work, but following out hygienic instructions, the blood count at the end of a month showed 3,200 white cells and 4,352,000 red cells per c. mm The above cases are interesting in that they show the early effects of chronic benzol poisoning upon the cell content of the blood, a condition which may exist without the presence of other symptoms, and which suggests a practical and ready means of detecting incipient cases. The chief danger in chronic benzol poisoning arises from the fact that only after serious damage has occurred does the patient realize the gravity of his condition. The institution of periodic blood examination of all employees exposed to benzol fumes, irrespective of concentration or ventilation devices, would go far toward avoiding such hazards.

Flandin and Roberti (57) call attention to a fatal case of purpura in an automobile factory. A young woman had been employed for about two months in a small "hot room," using a solution of rubber dissolved in benzol The room was poorly ventilated, and five other employees were working in it. They were free to take frequent rest periods outside in the fresh air. The patient in question, who was previously well, developed headache, dizziness, and pallor, fatigue, nausea and vomiting; then, later, ecchymoses appeared on the extremities and body, and also bleeding from the membranes. There resulted a progressive anemia, with fever. The blood showed R. B. C. 2,110,000; W B. C. 1,600, Hb. 20 per cent; polynuclears 27 per cent; mononuclears 67 per cent. Death followed within three weeks of the onset of symptoms. Previous to this fatality three other cases of purpura had occurred among the employees of this "hot room," one of the cases proving fatal Starr (58) stresses the importance of detecting the early symptoms of benzol poisoning, emphasizing the fact that the late advanced signs and symptoms usually imply the existence of considerable damage to the organs and tissues and the loss of much valuable time so far as a possible

cure is concerned. He calls attention to a rather unusual outbreak of chronic poisoning. Benzol cement, for economic reasons, is used to some extent in the millinery industry in place of sewing. That the hazard in such use is not negligible is shown by his report. In a millinery establishment a young girl employed as a hat maker presented symptoms of gastralgia, irritation of the upper respiratory passages, headache, and tachycardia upon which a diagnosis of benzol poisoning was based. On inquiry it was found that the girls were employed in brushing benzol cement on buckram hat forms on which they then pressed the cloth or other material to be attached Natural ventilation in the workroom was poor and no means for artificial ventilation were provided The benzol odor was quite distinct, even at some distance from the workers For a while the windows had been closed because of the cool weather prevailing outside, and it was at this time that the chief difficulty arose. The company officials claimed that for the past four years the same brand of cement had been used and that no trouble had arisen. Twenty-two of the 27 girls who actually handled the cement presented definite symptoms of chronic benzol poisoning Two out of four others who did not handle the cement, but who were exposed to the fumes in the room, also gave evidence of being affected. The chief symptoms elicited were "irritation of the mucous membrane of the upper respiratory tract, nausea, vomiting, burning sensation in the epigastrium, frequent urination, giddiness, slight air hunger, and weakness." Starr states that "These symptoms have a tendency to grow worse after the affected person leaves the atmosphere of the factory." Since the cement in this case was only one-third benzol and two-thirds carbon tetrachloride, it is probable that the latter substance contributed to the symptom complex.

Reifschneider (59) also draws attention to the high percentage of workers giving evidence of early symptoms of benzol poisoning. Out of 60 workers employed in the coating room or "dope room," in a can factory, 48 per cent complained of headaches, 36 per cent of dizziness, 16 per cent of pains in the abdomen, 12 per cent of nosebleed. Out of 60, two had red cell counts under 2,000,000, nine had counts under 2,500,000, thirteen had counts between 2.5 and 3.5 million. Reifschneider directs attention to an apparent family characteristic of high susceptibility to benzol. In one family there were three cases, two of which were fatal, while the third had a secondary anemia and was removed before other symptoms developed.

Meda (60) calls attention to the frequency of chronic benzol poisoning in Milan Here many women are employed in the manufacture of raincoats and other rubber goods in which rubber cement is used. He reports three fatal cases occurring in the winter of 1921 among young women who used rubber cement in this work. Four other similar

fatalities occurred in another factory, in addition to several other cases of poisoning which did not prove fatal. Four additional fatal cases occurred in 1922. In this connection Meda cites a case illustrating the particular danger of benzol poisoning in cases complicated by pregnancy. A young married woman had been engaged in raincoat manufacture for seven years without manifesting any untoward symptoms Several months after becoming pregnant, however, definite signs of poisoning rapidly set in with increasing severity. Headache, dizziness, nausea, bleeding gums, and purpura appeared Her delivery was normal, but the symptoms progressed, the red cell count dropping to 600,000 per c. mm., and the white cell count to 1,700 cells. The hemoglobin fell to 15 per cent With careful treatment, however, this patient recovered. Pugliese (61), who studied these cases in Milan, found concentrations of 1,000 parts benzol per million parts of air, and states that serious poisoning may result from concentrations of 200 to 300 parts per million parts of air In the Milan cases Meda calls attention to the apparent spontaneous outbreaks of chronic benzol poisoning which seem to appear more frequently in the winter months and to which young women are peculiarly susceptible He believes that among other predisposing factors, chlorosis, tuberculosis, and pregnancy play a prominent part.

Brucken (62) relates two interesting cases occurring in a rubber factory where girls were employed in cementing rubber balls. One, a girl of 22, had been employed for three years. Headache, dizziness, and weakness developed, while later, blue spots readily appeared on the slightest injury. Frequent and excessive menstruation and an extreme secondary anemia were also present. His other case was that of a young woman, aged 23 years, who had also been employed for about three years. The usual symptoms of chronic poisoning appeared, headache, dizziness, palpitation, bleeding gums, frequent menstruation, blue spots on the arms and legs An advanced anemia was also present. Both cases responded favorably to rest and medical treatment. Faure-Beaulieu and Levy-Bruhl (63) give some interesting neurological findings in the case of a female factory worker who developed malaise, faintness, nausea, palpitation, and general loss of strength. In time nervous symptoms appeared which indicated lesions of the posterior columns and of the pyramidal tracts. The main neurological signs were Increased tendon reflexes, bilateral clonus, positive Babinski, impairment of deep sensitivity, pseudo-tabetic lesions with paresthesias (pain and temperature sense impairment), ataxia and paraplegia, and motor impairment, signs all indicating sclerosis of the dorsal columns and pyramidal tracts. Such lesions were probably due to the combined effects of the prolonged and persistent anemia, and to the possible

effect that the benzol itself might have exercised on the central nervous structure, inasmuch as it has been found that benzol finds special lodgment to excess in these tissues The blood count in this case showed the usual severe secondary anemia and other findings associated with advanced chronic benzol poisoning

Teleky and Weiner (64) give several interesting cases occurring in connection with the manufacture of rubber goods Of 11 cases examined, only 2 were found to be free from any evidences indicating benzol poisoning The symptoms presented were variable—headaches, nausea, eructations, vomiting, tendency to bleed from membranes, irritation of conjunctivæ, and menstrual irregularities being the most frequent The usual secondary anemia with reduced platelets and inversion of the leucocyte-lymphocyte formula were present The substitution of benzine for benzene for a period of eight weeks resulted in considerable alleviation of the symptoms, the definite improvement being marked both objectively and subjectively They emphasize the value of the substitution of other solvents in place of benzol, together with careful medical supervision, believing that blood counts offer a ready means of detecting the early cases Rohner, Baldridge, and Hansmann (65) made a careful study of a case of chronic benzol poison in an effort to correlate the morbid findings described in man and animals exposed to the action of this solvent, and to observe the effects of benzol in chronic myelogenous leukemia. The patient had been exposed to benzol fumes for about three months and presented the typical findings of chronic benzol poisoning. The red cells were reduced to 860,000 and the white cells to 1,400 per c. mm , hemoglobin, 20 per cent The platelets were reduced to 70,000 per c. mm. Autopsy showed numerous hemorrhages into skin membranes and meninges. A bronchopneumonia was present, also focal necrosis of the liver.

Schwenke (66), reporting typical cases of benzol poisoning, concludes that the fumes of crude benzene or the first runnings appear to be more toxic than the purified product.

In addition to chronic cases of poisoning by inhalation, local lesions have been reported from the prolonged handling of compounds containing benzol Carozzi (67), in the results of his inquiry into the Italian printing trade, states that "among linotypists and pressmen we may occasionally observe a peculiar symptomatology, confirmed by the examination of the blood and caused by the continual use of benzol, benzine, mineral oil, and benzographol (pricking, tingling, numbness in the extremities, the number of blood corpuscles is greatly increased)." Vignolo Lutati (68) cites two cases of occupational dermatitis in the interdigital webs of fingers The hands had been frequently wetted in solution of india rubber. Inquiry

showed that a number of other workmen had been obliged to give up work because of similar skin lesions. In Harrington's (34) study of 120 men employed in tire building, a tire builder stated that 16 to 18 men employed in his department had developed lesions similar to his own The worker in question had been employed for two years, but during the last three months a papular eruption had appeared on his arms, feet, ears, and neck. These lesions disappeared when naphtha (presumably petroleum naphtha) was substituted for benzol. Milian (69) also records a case of erythema of the extremities in a worker who handled dyes dissolved in benzene. Simonin (13) noted irritation of the skin, with swelling and itching, in acute poisoning by swallowing Benzene erythema and other cutaneous lesions are relatively frequent in workers handling compounds of benzene. Wolff (70) showed a passing disintegrating effect of benzol on the skin when there is prolonged contact.

In summarizing this review of the literature the following factors should be emphasized in regard to chronic benzol poisoning

Chronic benzol poisoning occurs with greater frequency in cold weather or the winter months when natural ventilation is usually reduced to a minimum by closed windows and doors so that the concentration of the poison in the atmosphere reaches a maximum. Atmospheric conditions of temperature and humidity also play an important part. At times of high heat and high humidity, other things being equal, spontaneous and sporadic outbreaks are most likely to appear. Young girls are especially predisposed to benzol poisoning, as are also pregnant women Conditions of general ill health, tuberculosis, chlorosis, and other conditions lowering the general vitality or interfering with free function of the eliminative organs have a strong predisposing effect The early symptoms comprise headache, dizziness, malaise, loss of appetite, ready fatigue, shortness of breath, and burning of the eyes, throat, and respiratory-membranes Later, nausea and vomiting, with epigastric burning and pain, may appear, and sensations of chilliness and general weakness, with bleeding from the mucous membranes of the nose, mouth, gastro-intestinal tract, and genito-urinary tract. Too frequent menstruation, with prolonged and uncontrollable bleeding from the vagina, is very common About this time petechiae and purpuric hemorrhages may appear on the body and extremities. Burnet (71) regards purpura as a more serious prognostic sign than bleeding from the membranes. Other lesions of the skin may appear in the form of itching erythema, dry scaling, or vesicular papules. Later, complications affecting the central and peripheral nervous system may develop. Various forms of neuritis, with lesions affecting the dorsal column and the pyramidal tracts, may appear, giving rise to pares-

thesias, anasethesias, impaired locomotion, tremor, and trophic disturbances (63) The blood changes are typical

A leucopenia develops in most cases after exposure and increases in severity, although in some cases this is not absolute. The leucopenia may be extreme, reaching almost a complete absence of white blood cells. A reduction in the red cell count then appears, but somewhat later than the leucopenia. The resultant anemia may become extreme, the red cell count being lowered to less than 500,000 per c. mm A corresponding reduction in the hemoglobin occurs to as low as 15 per cent. A considerable reduction in the platelet count appears, especially in the later stages of poisoning. Blood smears present the picture of an aplastic anemia showing but slight changes in the appearance of the red cells Some pallor and anisocytosis are common Almost complete absence of regenerative forms with very few megaloblasts and normoblasts are noted, with scantiness of platelets A marked diminution of the granular types of white blood cells is seen, with a relative increase in the mononuclear forms. The leucotoxic effect is first noticed and is more pronounced on the myelocytic than on the lymphatic elements, so that an inversion of the leucocyte formula results. This gives a relative increase in the lymphocytes and a lowering of the polymorphonuclear forms.

In rapidly developing cases, however, this inversion of the leucocyte formula may not appear, according to Fontana (72). A relative increase in the large mononuclear cells is common Eosinophilia has also been noted in early poisoning, but this disappears rapidly on cessation of exposure (13), (73) The urine may show albumin, fat, casts, hemoglobin, and conjugated sulphobodies. On autopsy the typical findings consist of hemorrhages in the skin, mucous and serous surfaces, and the viscera, pallor of the organs, with muscles of a deep red color. Submucous hemorrhages are found along the gastrointestinal tract, in the pleura, pericardium, endocardium. The marrow of the long bones presents the typical picture of an aplastic anemia.

The treatment in chronic benzol poisoning consists of change of employment in the very early cases, preferably to open-air work, together with the observance of general hygienic measures These early cases generally respond very promptly to treatment. In the severe cases of advanced poisoning in which hemorrhages and anemia have occurred, treatment consists of rest, fresh air, sunshine, iron-containing foods, and the general hygienic measures that are used in combating secondary anemias, tonics, hydrotherapy, ultraviolet ray, etc In advanced anemia with purpura and hemorrhages, McClure emphasizes the value of frequent and repeated blood transfusions. It is well to bear in mind that the anemia and other signs frequently continue and progress for long periods after removal from

exposure, so that carefully adjusted treatment and prolonged convalescence are essential

IV. THE EFFECT OF BENZOL UPON THE BLOOD CELLS AND ITS USE AS A THERAPEUTIC AGENT

The most characteristic pathological effect of benzol is, perhaps, its destructive influence upon the cells of the blood and the blood-forming organs. This effect is so important that it deserves detailed consideration. It seems also desirable to refer to the use of this property of benzol in the treatment of certain diseases characterized by an excess of white blood cells, even at the cost of a slight digression from the subject of industrial benzol poisoning, so that the literature of all phases of the subject may be presented in one place

The typical result of exposure to benzol is a decrease in white blood cells, and this is often followed by a similar reduction in red cells. The first reaction may, however, be an increase in red cells, and, with very minute doses, there may even be an initial increase in the white cell These early increases are undoubtedly due to slight destruction of cells in the circulating blood overbalanced by an increased production of new cells by the cell-forming or hematopoietic organs (the spleen, lymph nodes, and bone marrow). Prolonged dosage or temporary high dosage is always accompanied, however, by damage to these hematopoietic organs themselves and by marked reduction in blood cell content

The temporary stimulating influence of slight amounts of benzol is illustrated by the work of Rabe and Hirshland (74), who found that the administration of minute doses (first to thirtieth decimal dilutions) to men and women produced an increase in white cells (with a decrease in red cells, which seems somewhat anomalous) and an increase in the amount of urine. So, too, Langlois and Desbouis (75) found that exposure to small quantities of benzene fumes in low concentration led to the production of a leucocytosis. There likewise resulted a hyperglobulia, the increase in the red blood cells amounting to as much as 33 per cent above normal. There was, however, no coincident increase in the hemoglobin. Langlois and Desbouis found that within 10 days after exposure the blood returned to its normal state. They also pointed out that these increases in red and white cells were due to an intense hematopoiesis and not to loss of the blood plasma. Similar findings have been noted by other observers (48), (76), (77), (78).

The normal destructive influence of benzol in higher concentration is illustrated by the work of Pappenheim (79), who, by injecting benzol subcutaneously, obtained a leucopenia with a relative decrease in the polymorphonuclear cells, while the lymphocyte count remained more

or less unchanged. The leucopenia occurred in the peripheral blood stream, but in the splanchnic vessels he observed an increase in the leucocyte count. This leucotoxic effect of benzol was made the subject of considerable investigation by Selling (48) (76), who reported three cases of chronic benzol poisoning with two deaths In these cases marked leucopenia and anemia were observed and the autopsy findings consisted primarily of hemorrhages in the skin, mucosa, and mesentery Prolonged studies of the effect of benzol upon the hematopoietic system in animals threw important light upon the degenerating and regenerating influences affecting the entire hematopoietic system. From these animal experiments Selling emphasized the leucotoxic action of benzol, which not only destroyed the white cells in circulation but extended its destructive influence to the entire hematopoietic system, the bone marrow, lymph nodes, and spleen, and also led to fatty degeneration of the other organs. The leucopenia he found to affect the polymorphonuclear cells to a considerably greater extent than the lymphocytes, and, similarly, the myelocytic structures more than the lymphadenoid. Little direct effect was noted in the circulating red cells, however. In addition to the anemia, pallor and some anisocytosis were present, but no poikilocytosis. Autopsy revealed processes amounting to almost complete aplasia in the bone marrow, this aplasia affecting all the cell types. In the spleen a destruction of the parenchymal elements leading to an aplasia was noted, the aplasia affecting the cells of both the malpighian corpuscles and the pulp strands. Fontana (72), in his experimental work, noted a diminution in the volume of the spleen in rabbits poisoned with benzol. Similar destruction was noted in the follicles of the lymph glands. Of the other organs the liver and kidney showed varying grades of fatty degeneration, and hemorrhages were present in the serous and mucous surfaces. Selling noted that if the benzol injections were discontinued in time, active regeneration occurred in the organs and islands of blood-forming cells developed in the marrow. In the spleen active myeloid-metaplasia occurred and islands of myelocytic and erythroblastic tissue developed in addition to the usual splenic structures. Similar findings have been noted by other workers (72) (78) (104)

Weiskotten (78) and his colleagues call attention to a marked initial fall in the absolute number of both amphophiles and small mononuclears. This preliminary fall is followed by a primary rise in the leucocyte count, which he shows to be due mainly to an increase in the amphophiles. This is the phenomena observed by Rabe and Hirshland and Langlois and Desbouis. This primary rise is followed by a secondary drop in the white cell count, which again is due mainly to a drop in the amphophilic cells, the small mononuclear cells playing

but a secondary rôle in either the increase or decrease. The amphophilic curve follows closely that of the total white cell curve, and toward the end of the experiment, when benzol has been discontinued, the total white count assumes a new level which is generally somewhat lower than the original normal level. This lowered new level is again due in part to the failure of the small mononuclears to rise to the point existing before the beginning of injections, whereas the polynuclear cells do approximate the original level (80). In benzene inhalation experiments similar results were obtained, but no diphasic leucopenia was observed (103) In their study of the red cell reduction, Weiskotten and Steensland (80) found that the compensatory metaplasia in the spleen was of slight significance and that this organ played an insignificant rôle in either the destruction or regeneration of the red or the white cells following benzol poisoning. A relative eosinophilia has been noted in acute and early chronic poisoning, but this rapidly disappears on removal from exposure (13) (73). Duke (81), experimenting with rabbits, obtained an initial rise in the platelet count up to 1,780,000, but this was followed by a rapid fall to a value as low as 61,000. Hurwitz and Drinker (82) found that the platelet count might remain high with a low white cell count, and in the light of their bone marrow findings they suggested that this indicated either very rapid regeneration of the megacaryocytes (the origin of platelets) or a greater resistance of the megacaryocyte to the action of benzol. Weiskotten and his colleagues (83) noted a similar temporary increase in the platelets or thrombocytes, but this increase was in all cases followed by a gradual fall.

Study of the bone-marrow sections showed that as active necrosis developed in the bone marrow, the thrombocyte curve fell; but as regeneration of the marrow set in, active thrombocytosis appeared, with an abrupt rise in the thrombocyte count Sections of bone marrow at the beginning of this thrombocytosis showed large numbers of megacaryocytes in the regenerating marrow, this seeming to indicate that thrombocytes originate in this tissue. Similar decreases in the platelet count have been noted by other observers (48) (72). When the reduction in the platelet count becomes extreme, purpura hemorrhagica, with hemorrhages from the membranes, may take place. Associated with the decreased platelet count, Hurwitz and Drinker (82) have noted a reduction in the circulating prothrombin, but only in one case could they lower the platelets sufficiently to reproduce symptoms of hemorrhagic disease. Duke (81) noted prolonged bleeding time in benzol poisoning, but this occurred only when the platelets fell to a dangerously low level. Forbes and Hompe (84), exposing cats to an atmosphere of benzol vapor sufficient to keep them unconscious, found no constant change in the coagulation time or in the prothrombin content. No hemorrhages were found after five

hours' exposure and no evidence of hemolysis was present, and the urine was never dark or cloudy It would seem that the changes in the bleeding and coagulation time are not so likely to appear in acute poisoning as in chronic poisoning, a fact which probably explains the lack in uniformity of results obtained by Forbes and Hompe. McClure (51) observed greatly prolonged bleeding time in his cases, as have also most other observers in either animal experiments or in clinical observation.

The unfavorable influence of benzol upon the blood cells has led to further important research into its effect upon the general serological and immunological aspects of the blood. Winternitz and Hirschfelder (85), working on experimental pneumonia in rabbits, found that the resistance of these animals was strikingly reduced after they had been given benzol injections sufficient to produce a leucopenia. The animals were rendered leucopenic by benzol administration, and intratracheal insufflations of virulent pneumococci in graded doses were then administered It was found that the resistance of the animals so treated was markedly reduced, so much so that they all died within 13 to 27 hours after injection, while in the control animals not treated with benzol the average interval preceding death was 61 hours It was also found that the cells of the exudate in the lungs were characteristic and proportional to the type and the number of cells found in the bone marrow at the time of death. Besides the usual cell elements, the exudate included such rare forms as megacaryocytes and granulocytes corresponding to the types found in the marrow. Kline and Winternitz (86) further emphasize the lowering of resistance that accompanies such leucopenia. Animals suffering from leucopenia caused by benzol readily succumb, while animals treated with injections of toluol (homologue of benzene which produces a leucocytosis) not only have normal resistance but exhibit an increase in resistance proportional in some degree to the leucocytosis produced. They note, moreover, that the blood count is not always a safe index of bone marrow activity. Weiskotten and Steensland (87), in studying the effect of benzol upon rabbits, noted that evidences of active acute infection frequently appeared which were not present prior to the injections. They suggest that benzol administration by lowering the resistance may stir up latent or quiescent infection In three out of the four animals developing spontaneous infections after benzol treatment, there was absence of the typical bone marrow aplasia, and they conclude that the white cell count is not an absolutely safe guide in the therapeutic administration of benzol. Similar observations had been made by other observers

Weiskotten, Schwartz, and Steensland (88) have noted that the interval between the first injection of benzol and the onset of the deuterophase (secondary decline in the number of white blood cells)

varied between 8 and 13 days. This corresponds closely with the period required for sensitization after injection of antigens. By subjecting rabbits to successive sets of injections the investigators found that there occurred no changes in the deuterophase, suggesting that it was attributable to an antigen-antibody reaction. Schiff (89) demonstrated, however, that small doses of benzol increased the anaphylactic reaction of guinea pigs sensitized to sheep serum, while large doses decrease their sensitiveness.

Hektoen (90), using defibrinated sheep blood as antigen found a marked reduction in the formation of percipitins and hemolysins and in phagocytic power in rabbits which had been treated with benzol. In some animals he found almost an entire suppression of these immune bodies Together with these findings there appeared the usual picture of leucopenia and injury to the hematopoietic apparatus. Rusk (91) likewise found a similar depression in the production of hemolysins and precipitins when animals had been treated with benzol. Simonds and Jones (92) using washed dog blood corpuscles, as antigen, made a study of the hemolytic titer in rabbits previously treated with subcutaneous injections of benzol. They found that the titer of the serum in the benzol-treated animals ranged from one-sixteenth to one-quarter that of control animals Using killed cultures of *B. typhosus* as antigen they found a marked decrease in the production of agglutinins, but to a lesser extent than in the hemolysins. Using typhoid bacilli, they found a markedly reduced power to produce opsonins, but this was noted to a still lesser extent than either the reduction in the agglutinins or hemolysins. White and Gammon (93) noted that rabbits which had been treated with benzol inhalation were considerably less resistant to tuberculous infection than animals not so treated, and Camp and Baumgartner (94), in their study of the inflammatory reactions in rabbits treated with benzol, found that little resistance was offered to the entrance and growth of bacteria in such animals.

It appears from the foregoing that, apart from variation and individual susceptibility and the effect of atmospheric conditions, such as heat, etc., all of which may modify the benzol hazard in any particular case, there may also result in benzol poisoning a depression in the fundamental defense mechanisms of the blood which markedly lowers resistance to other disease processes, all of which considerations contribute still more to our realization of the seriousness of the benzol hazard.

Suprisingly little has been done in regard to the ultimate fate of benzol in the body. It would appear from the work already reported, however, that a considerable portion of the absorbed benzol is excreted in an unchanged condition through the lungs. Juvalta (95), on feeding phthalic acid, found that the benzene ring was broken down

in the animal body. Jaffe (96), in experiments upon dogs and rabbits, noted that, following the prolonged administration of benzene, very small quantities of an N-free acid were present in the urine. The formula was determined to be $C_6H_6O_4$, an oxidation product of benzol, and was found to be identical with muconic acid. This represented, however, but a minute fraction of the total benzene administered. Fuchs and Soos (97) confirmed the work of Jaffe. Sohn (98) found that benzene influenced the oxidative or katabolic processes in the organism, as was shown by an increase in neutral sulphur and changes in the amount of urea and NH_3. Albuminuria also appeared. Brewer and Weiskotten (99) made daily determinations of the phenol content of the urine of rabbits prior to and subsequent to daily injections of benzol, the determinations extending throughout the entire cycle of the leucocyte curve. They found that the phenol content of the urine increased during the prophase, or initial drop in the white cell count, but that no increase in the phenol content occurred during the deutrophase, or secondary drop in the count They conclude from this that the secondary drop in the leucocyte curve is not the result of slow or of delayed absorption of the benzol, as was suggested by Selling (76). Underhill and Harris (100), studying the influence of benzol upon metabolism found a marked increase in creatine output within 48 hours after injection of the substance. This was shortly followed by a sharp fall in the creatine output, but a secondary rise in the excretion appeared still later. There was a less marked increase in the output of total nitrogen, and the total nitrogen elimination curve followed closely that of the elimination of creatine although the total nitrogen was not increased to so great an extent as the creatine. They conclude that benzol exerts a marked catabolic influence on the body structures as a whole

V. THE EXTENT OF THE BENZOL HAZARD IN INDUSTRY IN THE UNITED STATES

Passing from the review of the existing literature of benzol poisoning first of all will be considered the evidence obtained in regard to the seriousness of the problem as it exists in industry in the United States at the present day.

In order to throw light upon this general question, and also to obtain information as to the localities where more intensive studies could profitably be undertaken, a preliminary list was prepared of 324 industrial establishments which, from the nature of their products, might be expected to use benzol. Through the courtesy of Mr. W S. Paine, of the Aetna Life Insurance Co., the following questionnaire was forwarded to all of the 324 industrial establishments in July, 1923.

PRELIMINARY QUESTIONNAIRE FOR BENZOL STUDY

1 Is benzol used or produced in any of the processes in your plant?
If so, would you be willing to give some information as to the extent to which it is used and the amounts employed?
2 How many of your employees are in processes where benzol is present?
(a) Fumes
(b) Liquid
3. How many are directly exposed to benzol?
(a) Fumes
(b) Liquid
4. Have you experienced definite cases of poisoning?
5 Have you considered benzol poisoning as a cause of illness, absenteeism, or labor turnover among your employees on account of any special type of sickness, for example—
(a) Anemia, purpura, hemorrhages, gastro-intestinal or nervous disturbances, neurasthenia, disturbance of menstrual function in women workers, or
(b) Sudden cases of collapse, shock, cyanosis or heart failure.
6. What precautions are you taking to eliminate hazard from benzol poisoning?
(a) Fumes
(b) Liquid
Name of firm: --
Address --
Please forward to:

One hundred and forty replies were received in answer to this questionnaire. Fifty-six of those who answered replied that they did not use benzol in any form, leaving 84 firms who did make use of this substance Some idea as to the amount of benzol used by the firms replying to the questionnaire may be gained from the following figures. Thirty-six replies gave no definite information in regard to this point; in 19 cases the amount of benzol used was insignificant; in 6 cases it was between 5 and 25 gallons per week, in 4 cases between 26 and 99 gallons; in 10 cases between 100 and 500 gallons; in 3 cases between 501 and 999 gallons; in 6 cases over 1,000 gallons—reaching the very high figures of 2,200, 3,000, 7,500, 8,000, 10,000, and 30,000 gallons per week, respectively. The six largest users included three rubber companies (8, 23, and 25) and three large chemical concerns (13, 24, and 19), one of the latter being principally concerned with the supply of products for the making of can seals. It is interesting to note that out of 15 companies reporting cases of benzol poisoning, only 2 were among those using less than 100 gallons of benzol per week; 4 were among those using between 100 and 1,000 gallons; 3 were among the 6 firms using over 1,000 gallons; while 6 were among the 36 firms giving no information as to the amount of benzol used.

A more helpful analysis from our standpoint deals with the number of employees exposed to possible toxic effects of the benzol. We have this information reported for 67 firms, 73 industries having

failed to state the number of employees exposed in processes where benzol constitutes a hazard. The general results are indicated in the table below, with comparative figures showing the number of firms in each class which reported having had cases of benzol poisoning.

TABLE 1

	Number of employees exposed to possible benzol poisoning						
	0-4	5-9	10-24	25-49	50-99	100 and over	No information
Number of establishments in each class	30	14	10	7	2	4	73
Number of establishments reporting cases of poisoning	3	1	3	3	1	4	-- -----

Out of 23 establishments with 10 or more employees exposed to benzol poisoning, 8 were rubber factories, 5 were chemical works, 4 were paint and varnish makers, 3 were gas plants making benzol as a by-product, and 3 were plants of other types.

It will be noted that out of 44 establishments with less than 10 employees exposed to benzol poisoning only 4 reported having experienced cases of poisoning Of 17 firms with from 10 to 49 employees exposed, 6 had experienced cases of poisoning, while of the 6 firms with more than 50 persons exposed to benzol all but one had experienced industrial poisoning by benzol. It is of course possible that facilities for the diagnosis of benzol poisoning may influence data such as Table 1 presents, and that full-time physicians in large industries may naturally be expected to diagnose cases of industrial poisoning more frequently than persons who are not familiar with the symptoms of such conditions.

Table 2 presents the more important data with regard to 33 individual industries whose reports seemed of special interest for one reason or another The table includes (*a*) all plants reporting cases of benzol poisoning, (*b*) all plants reporting the exposure of 10 or more employees to the possibility of benzol poisoning and (*c*) all plants reporting the use of 500 or more gallons of benzol per week. The plants are arranged in order according to the number of employees exposed to benzol and are identified by arbitrary key numbers, since the information obtained in this study was in many cases of a confidential nature

TABLE 2.—*Data with regard to establishments where benzol hazard may exist*

Key Number	Product	Gallons of benzol used per week	Number employees exposed	Poisoning cases	General precautionary measures used
8	Rubber goods	2,200	1,080	Yes	Ventilation
21	do		150	Yes	Do
9	Chemicals	525	100	Yes	Closed containers, ventilation
15	do		100	Yes	Closed apparatus, ventilation, helmets partial elimination of benzol
5	Rubber goods	100	50	Yes	Ventilation, medical examination
26	Celluloid, leather, cloth		50	Yes	Local ventilation, medical examination
27	Japanned goods	60	35	No	Ventilation.
6	Gas by-products	500	32	Yes	
25	Rubber goods	7,500		No	Closed containers, ventilation.
23	do	8,000	30	Yes	Do
28	do		25	No	Limiting use of benzol
29	Chemicals		25	No	
17	do		25	Yes	Closed containers, ventilation
30	Rubber goods	25	25	No	
31	Gas by-products		20	No	Closed containers
38	Paints and varnishes		20	No	Ventilation, closed containers
32	Cans		18	No	Local ventilation
11	Paints, varnishes		15	Yes	Respirators
33	Gas by-products		13	No	Closed containers, ventilation
20	Rubber goods	25	12	Yes	Local ventilation, rubber gloves
22	Vegetable oils		12	Yes	Medical examination, education
34	Chemicals		10	No	Closed containers, ventilation
35	Paints, varnish	250	10	No	Education
10	Chemicals		10	No	Closed containers, care in cleaning tanks.
19	Can solvents	10,000	8	Yes	Ventilation
24	Chemicals	30,000	7	No	
36	do	750	4	No	Closed containers, ventilation
37	Benzol used in cutting asphalt	700	4	No	Closed containers, low temperatures
13	Chemicals	3,000	4	No	Closed containers
12	Paints, varnish	150	3	Yes	Change of employment
7	Rubber goods	5	3	Yes	Ventilation, limitation of use of benzol

The result of this preliminary study was to indicate that the industrial firms using benzol were generally alive to the dangers involved and had in most cases taken definite precautions for the protection of their employees. Nevertheless out of 23 establishments in which 10 or more persons were exposed to benzol, 11, or nearly one-half, reported cases of poisoning, while of 6 plants in which 50 or more employees were exposed, all but 1 reported poisoning.

During the second year of the investigation many additional reports of benzol poisoning were obtained in those plants which were studied more intensively, and the net results of the questionnaire and the field study are presented in Table 3.

TABLE 3.—*Deaths and illness due to the use of benzol in industry, 1922–1924*

Plant No.	Accidental exposure to heavy concentrations		Habitual exposure to lower concentrations		Plant No	Accidental exposure to heavy concentrations		Habitual exposure to lower concentrations	
	Deaths	Illnesses	Deaths	Illnesses		Deaths	Illnesses	Deaths	Illnesses
5			4		48	2			1
6		1			50				1
7				1	59				2
8				44	61				2
9	1				62				
11				1	67	1		2	7
12				Several	76				1
15			3	Several.	78			2	3
16				1	83				1
17		1		1	93				7
20				2	95				2
23				2					
27				2	Total	4	2	11	81

In the period going back for several years prior to 1925 the necessarily very incomplete data of this survey thus revealed 15 fatalities and 83 cases of sickness due to benzol, a record of considerable significance It is generally accepted that reports to the various State health departments understate the real situation with regard to industrial disease, and yet in the State of Ohio 29 compensable cases of benzol poisoning occurred during the five-year period ending June 30, 1925 (101) During the last year of our work no attempt was made at a further canvass of new cases; but at lest seven fatalities resulting from benzol poisoning were brought to the attention of the committee as occurring during the first nine months of 1925.

The subsequent portions of this report deal with the committee's studies of chronic benzol poisoning in some detail. It may, however, be well briefly to describe here some of the acute cases of poisoning, which have come directly or indirectly to the attention of the committee during the progress of the work

Plant No 6. A worker operating a benzol still was overcome by fumes when the distilling process started too rapidly and the rectifying chamber ran over.

Plant 67 An employee working in a trench to repair a leak in a pipe containing benzol was overcome by the vapors. He recovered in a few minutes and returned to work He collapsed a second time and died without regaining consciousness.

Plant 48. In this plant, benzol was used in a chemical process. The process depended on volatilizing the benzol, and leaks have frequently occurred The release of vapors due to these leaks resulted in the death of two workmen who were attempting to shut off the system. Recently a leak permitted such a great quantity of fumes to escape that they traveled around a fire wall, became ignited, and burned up the plant Apparently the exhaust ventilating ducts which were of fairly large size did not check the fire hazard or save the workmen from poisoning in this case.

Benzol was used as the solvent in the grease-extraction process at a garbage-reduction plant. The tank containing the benzol was supported on several masonry supporting-walls which, with the tank bottom, formed a closed pocket. This tank was found to be leaking and the workman who went under the tank into this inclosure was killed while looking for the leak.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Cities Notify Public of Water Purity. Regulations Promulgated by the State Department of Health of Minnesota. Anon. *Water Works Engineering*, vol 79, No. 6, March 15, 1926, pp. 323 324. (Abstract by H B Foote.)

In this article the regulations governing the posting of signs notifying the public of the approval of the public water supply are set forth. Fees required for the inspection and analysis of the water followed by the approval of the sign posting are given. These fees are annual and are set at the following figures

Population of municipality	Fee for each separate water-supply investigation
Under 1,000	$15 00
1,000 to 5,000	20 00
5,000 to 20,000	25 00
20,000 to 100,000	35 00
Over 100,000	50.00

Any extra investigations over the annual one must be paid for at the same rate as set forth.

Two official signs are given; each is 18 by 24 inches and should be of metal. The signs must be removed if for any reason the municipality fails to comply with the regulations and any recommendations set forth by the State board of health. It is optional with the city whether it shall come under this ruling or not, but no city shall post signs unless it has complied with all requirements

Chlorination of Water and Sewage. Earle B Phelps *Journal Boston Society of Civil Engineers*, vol. 13, No. 4, April, 1926, pp. 150–167. (Abstract by E C. Sullivan.)

This paper discusses chlorination in the light of the developments of the past 16 years. Inquiry is made into the principle and chemical basis of disinfection, the legitimate and proper rôle of chlorination in water supply practice, and the accomplishment and possibly some of the shortcomings of the process itself. It is estimated that not less than 30,000,000 people in the United States, living in some 3,000 communities, are to-day supplied with a chlorinated domestic water.

When calcium hypochlorite was first applied to drinking water, through fear that the addition of the chemical substance would lead to public disapproval the solution of hypochlorite was referred to as "potential oxygen" in an attempt to disguise the true nature of the treatment, based upon the theory that chlorine acted solely as an oxidizing agent. Later investigations have shown the oxidation theory to be untenable and that in comparison with other oxidizing agents the relative germicidal power of chlorine is much greater than

its relative oxidizing power. The view is now fairly established that the germicidal action of chlorine is a specific toxic action similar in its general effects to the action of phenol, copper sulphate, and other nonoxidizing germicides. It is pointed out that chlorine is in no sense a suitable reagent for oxidation of organic matter in general.

At the time when chlorination was first introduced it was felt that there was grave danger that this new process might be too readily accepted as a substitute for more thorough measures of water and sewage treatment. For once in the history of sanitation there was an actual danger that a sanitary achievement of real merit might be too readily accepted, for the cheapness and simplicity of the process threatened to bring about a condition of unsound practice which might discredit the process itself.

During the past 16 years the process of chlorination has become almost universal in water-works practice It has not only been very generally adopted in the case of slightly polluted waters, but has also been used as an adjunct to filtration processes of all sorts This development has permitted the use of higher loading factors upon filters, and has also, in many cases, provided a wide margin of safety between a badly polluted water and the consumer There is considerable discussion at the present time of the propriety of the use of chlorination alone in the treatment of moderately polluted water supplies Chlorination is an ideal method that provides a wide margin of safety at a low cost when superimposed as an independent process upon the usual treatment by filtration. However, in most cases where filtration is followed by chlorination somewhat greater reliance is placed upon the latter. Thus, chlorination becomes part of the major process and the margin of safety is narrowed. It is a matter of judgment just how far the "margin of safety" purpose of chlorination may safely be encroached upon in order to economize in capital and operating expenditures. It is not the matter of filtered or unfiltered waters that determines the limits of chlorination, but rather the quality of the water with which chlorination must deal. Exactly the same conditions prevail in the chlorination of raw water or waters not otherwise treated.

The writer also discusses the general reliability of chlorination processes as measured by the possibility and effects of mechanical failure; the reliability of control methods for regulating the dosage. the germicidal efficiency as affected by variable water conditions; and other similar matters. The desirability of duplicate apparatus is pointed out. The control of the dosage by the orthotolidine test is discussed. In each type and condition of water there is a certain relation between chlorine dosage, bacterial efficiency, and residual chlorine after a given lapse of time. When the test is properly standardized for a given water it becomes a valuable and almost indispensable guide

to proper dosage. The significance of "aftergrowths" is likewise touched upon. They should be looked upon with suspicion until their status in each case has been more fully determined.

The results of chlorination are discussed to considerable extent, data for a number of cities being cited. The author mentions that the gross treatment of statistical data in comparative typhoid fever rates before and after chlorination has often lead to erroneous conclusions. Suggestions are made for the proper handling of such data.

Tastes and odors are discussed briefly. For phenol wastes there seems to be no remedy except to keep the offending wastes out of the river. Mention is made of a slightly higher rate of dosage to overcome taste and odor troubles resulting from the chlorination of a water supply rich in organic matter

The chlorination of swimming pools and also of sewage is discussed In the usual sewage treatment processes bacterial removal is but incidental to the primary purpose of these oxidation processes. Chlorination possesses great merit for efficiency and economy in producing a reasonably disinfected effluent. Its use will be more frequently employed in the future as its merits become better understood and as need for better protection of inland and coastal waters becomes more manifest. The specific action of chlorine as a toxic agent in distinction from its action as an oxidizing agent is a general principle of chlorination, best illustrated in sewage practice.

Typhoid Epidemic from Deep Well, Polluted by Surface Seepage. R. O. Heater. *Water Works Engineering,* vol 79, No. 5, March 1, 1926, p. 272. (Abstract by F. C Dugan)

In drilling a well a small stream of water was encountered at about 155 feet, or about one-half the total depth, but it was not cased off. Ten years afterwards, due to a typhoid outbreak, it was discovered that water from an abandoned rock quarry was evidently seeping into this small stream. It was cased off and the water supply has not shown any contamination since.

Pure Water—No Typhoid. Anon. *Ohio Health News,* Ohio Department of Health, vol. 2, No. 5, March 1, 1926, pp. 3–4. (Abstract by Isador W. Mendelsohn.)

East Liverpool, Ohio, procures its water supply from the Ohio River at a point only 44 miles below Pittsburgh. The effect of the installation of a modern water-purification plant upon the typhoid incidence in the city is shown in the accompanying table, the factor of improvement in quality of milk being also responsible for the favorable data.

Data on typhoid fever at East Liverpool

Year	Population	Deaths from all causes, children under 5 years		Deaths from typhoid fever, all persons	
		Total	Rate [1]	Total	Rate [1]
1915	20,900	92	341	16	75.8
1916	21,000	125	600	15	71.4
1917	21,100	124	683	15	71.1
1918 [2]	21,200	115	540	18	84.9
1919 [3]	21,300	93	437	7	32.9
1920	21,411	96	451	10	45.7
1921	21,700	97	447	12	55.3
1922 [4]	22,000	84	382	4	18.2
1923	22,300	87	390	1	4.5
1924	22,600	49	217	1	4.4
1925	22,900			0	0

[1] Rate per 100,000
[2] Water-purification plant first placed in operation in May, 1918
[3] Plant placed in charge of consulting analyst on part-time basis in May, 1919
[4] Plant placed in charge of present filtration superintendent on full-time basis in September, 1922

Determining Chemical Dosage for River Water. K. C. Armstrong, assistant chemist, Metropolitan Utilities District of Omaha, Nebr., *Water Works Engineering*, vol 79, No. 5, March 1, 1926, pp. 267–268 and 292 (Abstract by F. C. Dugan.)

Variations in pumpage and changes in turbidity constitute a problem in determining the proper chemical dosage for the sedimentation system of the Omaha water supply. A rather unique apparatus for determining the amounts of coagulant necessary is described. The article shows what can be accomplished in the reduction of chemicals by proper laboratory control.

DEATHS DURING WEEK ENDED JUNE 26, 1926

Summary of information received by telegraph from industrial insurance companies for week ended June 26, 1926, and corresponding week of 1925. (From the Weekly Health Index, July 1, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended June 26, 1926	Corresponding week, 1925
Policies in force	64,836,039	60,370,192
Number of death claims	12,056	11,123
Death claims per 1,000 policies in force, annual rate	9.7	9.6

Deaths from all causes in certain large cities of the United States during the week ended June 26, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, July 1, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended June 26, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended June 26, 1926 [2]
	Total deaths	Death rate [1]		Week ended June 26, 1926	Corresponding week, 1925	
Total (64 cities)	6,196	11 3	10 7	[3] 711	712	[3] 57
Akron	36			3	4	32
Albany [4]	23	10 1	11 1	1	2	21
Atlanta	73			8	12	
White	31			3		
Colored	42	(5)		5		
Baltimore [4]	225	14 5	10 9	16	25	47
White	168			12		43
Colored	57	(5)		4		65
Birmingham	84	20 8	19 8	11	12	
White	37			4		
Colored	47	(5)		7		
Boston	177	11 7	10 6	26	29	73
Bridgeport	31			5	1	85
Buffalo	140	13 4	13 6	10	9	42
Cambridge	34	14 5	9 2	2	4	33
Camden	27	10 7	13 4	2	4	34
Canton	18	8 5	5 4	4	0	89
Chicago [4]	529	9 0	8 8	56	66	50
Cincinnati	105	13 3	11 8	8	11	50
Cleveland	200	10 9	8 7	28	18	73
Columbus	54	9 9	12 1	5	8	46
Dallas	44	11 5	12 9	5	6	
White	36			5		
Colored	8	(5)		0		
Denver	54	9 9	14 5	4	4	
Des Moines	25	8 9	11 8	2	4	33
Detroit	269	10 9	8 7	37	27	60
Duluth	18	8 3	10 9	2	0	47
El Paso	37	17 7	18 4	13	10	
Erie	22			3	7	57
Fall River [4]	28	11 1	8 5	5	4	73
Flint	17	6 5	6 8	1	5	17
Fort Worth	30	9 8	11 6	5	7	
White	27			5		
Colored	3	(5)		0		
Grand Rapids	30	10 0	11 2	2	5	29
Houston	57			7	7	
White	31			6		
Colored	26	(5)		1		
Indianapolis	64	9 1	10.5	5	6	37
White	51			3		25
Colored	13			2		110
Jersey City	69	11 3	9 1	9	10	64
Kansas City, Kans	25	11 1	10 8	0	2	0
White	18			0		0
Colored	7	(5)		0		0
Kansas City, Mo	70	11 0	11 9	7	10	
Los Angeles	198			17	28	47
Louisville	78	13 1	12 6	14	2	[illegible]
White	56			7		70
Colored	22	(5)		7		439
Lowell	25			0	4	0
Lynn	23	11.5	6 1	3	1	75
Memphis	85	25 0	23.0	13	19	
White	45			5		
Colored	40	(5)		8		
Milwaukee	91	9 2	9 4	11	7	51
Minneapolis	78	9 4	8 9	6	10	33
Nashville [4]	52	19 8	14 9	6	5	
White	32			2		
Colored	20	(5)		4		

[1] Annual rate per 1,000 population
[2] Deaths under 1 year per 1,000 births Cities left blank are not in the registration area for births
[3] Data for 62 cities
[4] Deaths for week ended Friday, June 18, 1926
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Kansas City, Kans , 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D C , 25

Deaths from all causes in certain large cities of the United States during the week ended June 26, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, July 1, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended June 26, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended June 26, 1926
	Total deaths	Death rate		Week ended June 26, 1926	Corresponding week, 1925	
New Bedford	24			3	6	52
New Haven	34	9.7	9.9	4	4	55
New Orleans	136	16.9	18.4	16	18	
White	81			9		
Colored	55	(5)		7		
New York	1,227	10.8	10.0	145	139	59
Bronx Borough	188	10.9	8.3	15	17	50
Brooklyn Borough	380	8.8	8.8	46	40	47
Manhattan Borough	607	14.1	13.1	68	68	75
Queens Borough	114	7.8	6.6	14	12	63
Richmond Borough	38	13.9	15.1	2	2	35
Newark, N. J.	74	8.4	8.9	15	6	72
Norfolk	38	11.4	11.4	3	6	56
White	15			0		0
Colored	23	(5)		3		149
Oakland	45	9.0	11.9	9	3	104
Oklahoma City	22			2	5	
Omaha	42	10.2	7.[illegible]	2	3	21
Paterson	33	12.0	10.7	2	7	35
Philadelphia	453	11.8	10.7	42	45	56
Pittsburgh	135	11.1	11.1	18	20	60
Portland, Oreg.	56			5	8	51
Providence	67	12.7	10.1	7	6	58
Richmond	59	16.3	14.0	9	12	113
White	39			4		78
Colored	20	(5)		5		175
Rochester	74	12.0	10.0	10	7	80
St. Louis	174	10.9	10.8	15	10	
St. Paul	54	11.4	11.9	5	5	44
Salt Lake City [4]	25	9.8	11.9	2	3	28
San Antonio	51	13.0	17.4	15	23	
San Diego	23	10.9	16.2	2	4	42
San Francisco	123	11.3	13.7	8	5	48
Schenectady	18	10.1	10.1	3	2	87
Seattle	77			4	2	37
Somerville	14	7.3	11.6	1	2	26
Springfield, Mass.	31	11.1	10.3	5	6	72
Syracuse	45	12.8	10.3	5	4	63
Tacoma	18	8.9	8.0	2	1	47
Toledo	68	12.1	8.7	9	4	87
Trenton	29	11.3	18.2	4	4	67
Utica	39	19.7	11.8	4	3	88
Washington, D. C.	134	13.2	10.5	11	15	63
White	84			5		41
Colored	50	(5)		6		109
Waterbury	22			5	4	107
Wilmington, Del.	22	9.3	8.5	2	4	47
Worcester	52	14.0	14.3	12	5	138
Yonkers	22	9.9	7.3	1	0	22
Youngstown	25	7.9	12.7	4	4	51

For footnotes 4 and 5, see p. 1436

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended July 3, 1926

ALABAMA

	Cases
Cerebrospinal meningitis	1
Chicken pox	9
Diphtheria	5
Influenza	7
Malaria	38
Measles	65
Mumps	14
Pellagra	40
Pneumonia	13
Poliomyelitis	1
Scarlet fever	7
Smallpox	46
Tetanus	1
Tuberculosis	42
Typhoid fever	48
Whooping cough	41

ARIZONA

	Cases
German measles	4
Scarlet fever	1
Tuberculosis	1
Typhoid fever	1

ARKANSAS

	Cases
Chicken pox	4
Diphtheria	2
Influenza	23
Malaria	96
Measles	23
Mumps	13
Paratyphoid fever	1
Pellagra	38
Scarlet fever	3
Trachoma	2
Tuberculosis	18
Typhoid fever	27
Whooping cough	50

CALIFORNIA

	Cases
Cerebrospinal meningitis:	
Los Angeles	1
Los Angeles County	1
Pasadena	1
Stockton	1
Chicken pox	108
Diphtheria	101
Influenza	5
Lethargic encephalitis	
Glendale	1
San Francisco	1
Measles	275
Mumps	73
Poliomyelitis	
Los Angeles	1
Sacramento County	1
San Francisco	1
Scarlet fever	70
Smallpox	6
Tuberculosis	189
Typhoid fever	14
Whooping cough	71

COLORADO

	Cases
Chicken pox	36
Diphtheria	6
German measles	2
Influenza	6
Malaria	1
Measles	62
Mumps	1
Pneumonia	1
Scarlet fever	14
Smallpox	7
Tuberculosis	67
Typhoid fever	11
Whooping cough	42

CONNECTICUT

	Cases
Cerebrospinal meningitis	1
Chicken pox	35
Diphtheria	7
German measles	12
Influenza	1
Malaria	1
Measles	153
Mumps	5
Pneumonia (broncho)	22
Pneumonia (lobar)	16
Scarlet fever	46
Tuberculosis (all forms)	26
Typhoid fever	4
Whooping cough	17

DELAWARE

Diphtheria	2
Malaria	2
Measles	11
Tuberculosis	5
Typhoid fever	4
Whooping cough	2

FLORIDA

Chicken pox	8
Diphtheria	8
German measles	1
Malaria	7
Measles	13
Mumps	8
Pneumonia	2
Scarlet fever	4
Smallpox	21
Tetanus	1
Tuberculosis	14
Typhoid fever	23
Whooping cough	12

GEORGIA

Chicken pox	4
Conjunctivitis (infectious)	1
Diphtheria	4
Dysentery	9
Influenza	1
Malaria	26
Measles	75
Mumps	3
Pellagra	1
Pneumonia	4
Scarlet fever	4
Septic sore throat	1
Smallpox	27
Tuberculosis	28
Typhoid fever	19
Typhus fever	3
Whooping cough	5

IDAHO

Chicken pox	12
Measles	4
Mumps	2
Scarlet fever	3
Smallpox	4
Whooping cough	5

ILLINOIS

	Cases
Cerebrospinal meningitis	
Bond County	1
Bureau County	1
Saline County	1
Chicken pox	178
Diphtheria	43
Influenza	40
Lethargic encephalitis	
Cook County	1
Du Page County	1
Measles	679
Mumps	45
Pneumonia	147
Scarlet fever	142
Smallpox	14
Tuberculosis	244
Typhoid fever	17
Whooping cough	173

INDIANA

Chicken pox	36
Diphtheria	16
Influenza	7
Measles	230
Pneumonia	6
Scarlet fever	49
Smallpox	46
Trachoma	1
Tuberculosis	22
Typhoid fever	3
Whooping cough	75

IOWA

Cerebrospinal meningitis	1
Chicken pox	10
Diphtheria	13
German measles	4
Measles	44
Mumps	3
Pneumonia	1
Scarlet fever	16
Smallpox	12
Tuberculosis	12
Typhoid fever	2
Whooping cough	13

KANSAS

Cerebrospinal meningitis	
Kansas City	1
Norwich	1
Chicken pox	20
Diphtheria	14
German measles	2
Influenza	2
Malaria	1
Measles	98
Mumps	8
Pneumonia	24
Poliomyelitis	
Cheney	1
Scarlet fever	15
Smallpox	3
Trachoma	1
Tuberculosis	78
Typhoid fever	11
Whooping cough	155

LOUISIANA

	Cases
Diphtheria	11
Lethargic encephalitis	3
Malaria	38
Pellagra	11
Pneumonia	8
Scarlet fever	7
Smallpox	10
Tuberculosis	33
Typhoid fever	22
Whooping cough	14

MAINE

Cerebrospinal meningitis	2
Chicken pox	1
German measles	11
Lethargic encephalitis	1
Measles	120
Mumps	10
Pellagra	1
Pneumonia	5
Scarlet fever	17
Tuberculosis	13
Typhoid fever	2
Whooping cough	34

MARYLAND [1]

Chicken pox	43
Diphtheria	17
Dysentery	4
German measles	2
Influenza	12
Lethargic encephalitis	1
Measles	123
Mumps	37
Paratyphoid fever	2
Pellagra	1
Pneumonia (all forms)	29
Scarlet fever	30
Tetanus	1
Tuberculosis	75
Typhoid fever	15
Whooping cough	60

MASSACHUSETTS

Cerebrospinal meningitis	3
Chicken pox	101
Conjunctivitis (suppurative)	10
Diphtheria	47
German measles	89
Influenza	2
Lethargic encephalitis	3
Measles	417
Mumps	97
Ophthalmia neonatorum	25
Pneumonia (lobar)	56
Poliomyelitis	1
Scarlet fever	241
Septic sore throat	1
Tetanus	1
Trichinosis	1
Tuberculosis (all forms)	166
Typhoid fever	3
Whooping cough	126

[1] Week ended Friday.

MICHIGAN

	Cases
Diphtheria	83
Measles	429
Pneumonia	34
Scarlet fever	186
Smallpox	5
Tuberculosis	285
Typhoid fever	3
Whooping cough	116

MINNESOTA

Cerebrospinal meningitis	1
Chicken pox	80
Diphtheria	32
Influenza	2
Measles	169
Pneumonia	2
Scarlet fever	115
Smallpox	1
Tuberculosis	73
Typhoid fever	5
Whooping cough	33

MISSISSIPPI

Diphtheria	10
Scarlet fever	2
Smallpox	1
Typhoid fever	37

MISSOURI

(Exclusive of Kansas City and St Louis)

Chicken pox	7
Diphtheria	3
Influenza	1
Measles	53
Mumps	1
Rabies in animals	3
Scarlet fever	12
Smallpox	1
Trachoma	4
Tuberculosis	6
Typhoid fever	6
Whooping cough	14

MONTANA

Cerebrospinal meningitis	1
Chicken pox	7
Diphtheria	5
German measles	2
Measles	44
Mumps	3
Poliomyelitis	1
Rocky Mountain spotted fever—Rock Springs	1
Scarlet fever	26
Smallpox	7
Tuberculosis	2
Typhoid fever	2
Whooping cough	1

NEBRASKA

Chicken pox	11
Diphtheria	3
Measles	33
Mumps	1
Scarlet fever	22
Smallpox	30
Tuberculosis	5
Whooping cough	36

NEW JERSEY

	Cases
Chicken pox	109
Diphtheria	83
Influenza	2
Measles	389
Pneumonia	48
Scarlet fever	146
Smallpox	3
Trachoma	1
Typhoid fever	15
Whooping cough	73

NEW MEXICO

	Cases
Chicken pox	4
Diphtheria	3
Malaria	1
Measles	6
Mumps	1
Rabies in animals	1
Scarlet fever	1
Tuberculosis	18
Typhoid fever	6
Whooping cough	13

NEW YORK

(Exclusive of New York City)

	Cases
Cerebrospinal meningitis	1
Chicken pox	168
Diphtheria	69
German measles	222
Influenza	4
Malaria	4
Measles	1,597
Mumps	106
Ophthalmia neonatorum	1
Pneumonia	152
Poliomyelitis	6
Scarlet fever	119
Septic sore throat	1
Smallpox	6
Tetanus	1
Typhoid fever	8
Vincent's angina	10
Whooping cough	279

NORTH CAROLINA

	Cases
Chicken pox	57
Diphtheria	16
German measles	53
Measles	350
Poliomyelitis	5
Scarlet fever	9
Smallpox	39
Typhoid fever	39
Whooping cough	355

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Cerebrospinal meningitis—Pittsburg	1
Chicken pox	6
Diphtheria	1
Influenza	10
Malaria	62
Measles	35
Mumps	5

OKLAHOMA—continued

	Cases
Pellagra	19
Pneumonia	7
Poliomyelitis—Atoka	1
Scarlet fever	8
Smallpox	8
Typhoid fever	58
Whooping cough	20

OREGON

	Cases
Chicken pox	24
Diphtheria	17
Influenza	6
Measles	64
Mumps	10
Pneumonia	3
Rocky Mountain spotted fever	1
Scarlet fever	19
Septic sore throat	1
Smallpox	
Lane County	16
Portland	24
Scattering	14
Tuberculosis	16
Typhoid fever	6
Whooping cough	29

PENNSYLVANIA

	Cases
Cerebrospinal meningitis—Lebanon	1
Chicken pox	275
Diphtheria	128
German measles	36
Measles	1,567
Mumps	59
Ophthalmia neonatorum	1
Pneumonia	20
Poliomyelitis—Morgan Township	1
Rabies	1
Scarlet fever	341
Smallpox	6
Tuberculosis	91
Typhoid fever	22
Whooping cough	429

SOUTH DAKOTA

	Cases
Chicken pox	6
Diphtheria	7
Measles	19
Mumps	5
Pneumonia	1
Scarlet fever	35
Smallpox	2
Tuberculosis	2
Typhoid fever	2
Whooping cough	20

TENNESSEE

	Cases
Chicken pox	5
Diphtheria	3
Dysentery	4
Influenza	5
Malaria	42
Measles	114
Mumps	3
Ophthalmia neonatorum	1
Pellagra	11
Pneumonia	8

TENNESSEE—continued

	Cases
Scarlet fever	9
Smallpox	
Hancock County	8
Scattering	13
Trachoma	2
Tuberculosis	51
Typhoid fever	59
Whooping cough	48

TEXAS

	Cases
Chicken pox	20
Dengue	4
Diphtheria	8
Dysentery	3
Influenza	7
Measles	5
Mumps	29
Paratyphoid fever	1
Pellagra	6
Pneumonia	4
Poliomyelitis	5
Scarlet fever	7
Smallpox	38
Trachoma	1
Tuberculosis	28
Typhoid fever	15
Whooping cough	96

UTAH

	Cases
Chicken pox	18
Diphtheria	7
German measles	1
Measles	22
Mumps	11
Pneumonia	5
Scarlet fever	1
Smallpox	3
Tuberculosis	1
Whooping cough	124

VERMONT

	Cases
Chicken pox	7
Measles	24
Mumps	23
Poliomyelitis	1
Scarlet fever	1
Whooping cough	12

VIRGINIA

	Cases
Poliomyelitis—Wythe County	1
Smallpox—Scott County	1

WASHINGTON

	Cases
Cerebrospinal meningitis—Seattle	1
Chicken pox	38
Diphtheria	5
German measles	10

WASHINGTON—continued

	Cases
Measles	94
Mumps	21
Scarlet fever	24
Smallpox	25
Tuberculosis	29
Typhoid fever	4
Whooping cough	18

WEST VIRGINIA

	Cases
Chicken pox	5
Diphtheria	2
Influenza	1
Measles	299
Pellagra	1
Scarlet fever	17
Smallpox	4
Tuberculosis	20
Typhoid fever	2
Whooping cough	33

WISCONSIN

	Cases
Milwaukee,	
Chicken pox	43
Diphtheria	15
German measles	4
Lethargic encephalitis	1
Measles	170
Mumps	4
Pneumonia	10
Scarlet fever	12
Tuberculosis	10
Whooping cough	43
Scattering,	
Cerebrospinal meningitis	1
Chicken pox	47
Diphtheria	17
German measles	43
Influenza	8
Measles	858
Mumps	62
Pneumonia	13
Scarlet fever	54
Smallpox	2
Tuberculosis	23
Whooping cough	97

WYOMING

	Cases
Cerebrospinal meningitis—Sheridan County	1
Chicken pox	3
Diphtheria	1
German measles	3
Measles	5
Rocky Mountain spotted fever—Natrona County	1
Scarlet fever	5
Smallpox	1
Typhoid fever	1
Whooping cough	5

Report for week ended June 26, 1926

NORTH DAKOTA

	Cases
Chicken pox	1
German measles	8
Measles	11
Mumps	5

NORTH DAKOTA—continued

	Cases
Scarlet fever	31
Smallpox	1
Whooping cough	9

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week.

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
March, 1926										
Pennsylvania	7	716		5	14,943		3	2,464	4	167
May, 1926										
Alabama	4	56	185	126	1,767	106	5	51	186	46
Delaware	0	10		1	194		0	37	0	0
Idaho	6	24	0	0	60	0	1	68	48	8
Kansas	0	37	66	1	2,527	1	1	214	77	10
Massachusetts	8	205	74	0	3,187	0	4	956	0	30
New York	24	940	514	12	13,794		7	1,933	9	83
Oregon	14	73	99		407		0	238	107	16
Rhode Island	0	30	0		474		0	36	0	2
South Carolina	0	79	1,627	830	237	534	4	62	80	99
South Dakota	0	19	6		283		2	417	11	0
Virginia	4	69	1,315	125	3,328	38	3	206	69	35
Washington	27	85	28		292		0	289	143	24

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended June 19, 1926, 36 States reported 871 cases of diphtheria. For the week ended June 20, 1925, the same States reported 972 cases of this disease. One hundred cities, situated in all parts of the country and having an aggregate population of more than 30,300,000, reported 656 cases of diphtheria for the week ended June 19, 1926 Last year for the corresponding week they reported 651 cases. The estimated expectancy for these cities was 784 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-three States reported 10,314 cases of measles for the week ended June 19, 1926, and 4,183 cases of this disease for the week ended June 20, 1925. One hundred cities reported 4,257 cases of measles for the week this year and 2,390 cases last year.

Poliomyelitis.—The health officers of 36 States reported 19 cases of poliomyelitis for the week ended June 19, 1926. The same States reported 44 cases for the week ended June 20, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-six States—this year, 2,434 cases; last year, 1,639 cases; 100 cities—this year, 1,356 cases, last year, 910 cases; estimated expectancy, 672 cases.

Smallpox.—For the week ended June 19, 1926, 36 States reported 346 cases of smallpox. Last year for the corresponding week they reported 603 cases. One hundred cities reported smallpox for the week as follows. 1926, 65 cases; 1925, 193 cases; estimated expectancy, 92 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—Three hundred and thirty-six cases of typhoid fever were reported for the week ended June 19, 1926, by 35 States. For the corresponding week of 1925 the same States reported 597 cases of this disease. One hundred cities reported 65 cases of typhoid fever for the week this year and 123 cases for the corresponding week last year. The estimated expectancy for these cities was 90 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 95 cities, with a population of more than 29,700,000, as follows: 1926, 538 deaths; 1925, 472.

City reports for week ended June 19, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	0	1	0	0	0	21	0	8
New Hampshire									
Concord	22,546	0	0	0	0	0	0	0	2
Manchester	83,097	0	1	0	0	0	18	0	1
Nashua	29,723	0	0	2	0	0	1	0	0
Vermont									
Barre	10,008	0	0	0	0	0	0	0	0
Burlington	24,089	2	0	0	0	0	13	0	0
Massachusetts									
Boston	779,620	32	48	24	0	1	93	72	9
Fall River	128,993	1	3	1	1	1	1	1	3
Springfield	142,065	5	2	0	0	0	7	0	1
Worcester	190,757	8	3	5	0	0	1	0	1
Rhode Island									
Pawtucket	69,760	1	1	0	0	0	1	0	0
Providence	267,918	0	6	1	0	1	25	0	4
Connecticut									
Bridgeport	(1)	7	4	0	1	1	4	0	3
Hartford	160,197	2	4	2	0	0	10	0	3
New Haven	178,927	6	2	0	0	0	46	2	3
MIDDLE ATLANTIC									
New York:									
Buffalo	538,016	0	10	4	0	0	17	8	14
New York	5,873,356	152	239	142	30	11	269	71	114
Rochester	316,786	4	6	12	0	3	35	1	5
Syracuse	182,003	9	5	1	0	0	336	14	4
New Jersey:									
Camden	128,642	0	4	3	0	0	15	1	1
Newark	452,513	37	12	7	0	0	65	17	6
Trenton	132,020	9	3	1	0	0	21	2	4
Pennsylvania									
Philadelphia	1,979,364	79	58	73		3	181	8	27
Pittsburgh	631,563	42	18	4		2	208	5	15
Reading	112,707	11	3	3		0	28	0	0

[1] No estimate made.

City reports for week ended June 19, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles cases reported	Mumps, cases reported	Pneumonia, deaths reported
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	6	7	10	0	0	163	9	7
Cleveland	936,485	44	19	34	1	0	21	3	14
Columbus	279,836	9	2	13	0	1	37	0	3
Toledo	287,380	44	5	4	0	2	179	0	3
Indiana									
Fort Wayne	97,846	4	1	1	0	0	41	0	2
Indianapolis	358,819	8	3	0	0	0	17	2	8
South Bend	80,091	3	1	0	0	0	41	0	0
Terre Haute	71,071	1	1	0	0	0	6	0	1
Illinois									
Chicago	2,995,239	174	78	52	5	1	286	13	38
Peoria	81,564	1	1	0	0	0	6	1	1
Springfield	63,923	2	0	0	0	0	7	0	1
Michigan									
Detroit	1,245,824	87	35	74	0	3	46	5	18
Flint	130,316	4	2	0	0	0	94	0	1
Grand Rapids	153,698	4	2	1	0	0	69	0	2
Wisconsin									
Kenosha	50,891	9	1	0	0	0	117	0	2
Madison	46,385	16	1	0	0	0	31	0	2
Milwaukee	509,192	107	11	6	0	0	303	25	9
Racine	67,707	5	0	0	0	0	221	5	2
Superior	39,671	0	0	1	0	0	2	0	1
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	2	1	0	0	0	53	1	5
Minneapolis	425,435	71	12	25	0	0	22	0	10
St. Paul	246,001	18	13	7	0	0	242	2	7
Iowa									
Davenport	52,469	0	1	0	0	--------	3	0	--------
Des Moines	141,441	0	1	2	0	--------	0	0	--------
Sioux City	76,411	1	1	0	0	--------	0	0	--------
Waterloo	36,771	1	0	1	0	--------	45	0	--------
Missouri									
Kansas City	367,481	2	4	2	2	2	13	0	6
St. Joseph	78,342	0	1	0	0	0	4	0	0
St. Louis	821,543	7	31	46	0	0	210	4	--------
North Dakota									
Fargo	26,403	2	1	0	0	0	0	1	0
Grand Forks	14,811	--------	0	--------	--------	--------	--------	--------	--------
South Dakota									
Aberdeen	15,036	0	1	0	0	--------	1	1	--------
Sioux Falls	30,127	0	0	0	0	0	6	0	1
Nebraska:									
Omaha	211,768	10	2	2	0	0	30	1	6
Kansas									
Topeka	55,411	8	1	0	0	0	4	0	0
Wichita	88,367	0	1	1	0	0	4	0	1
SOUTH ATLANTIC									
Delaware.									
Wilmington	122,049	1	1	3	0	0	4	0	3
Maryland.									
Baltimore	796,296	53	15	10	3	0	20	77	19
Cumberland	33,741	0	0	0	0	0	1	0	0
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia									
Washington	497,906	16	6	8	0	0	101	0	11
Virginia									
Lynchburg	30,395	--------	1	--------	--------	--------	--------	--------	--------
Norfolk	(1)	5	0	1	2	0	10	0	7
Richmond	186,403	3	1	5	0	1	120	4	3
Roanoke	58,208	1	1	0	0	0	10	0	0
West Virginia.									
Charleston	49,019	1	0	2	1	0	9	0	0
Huntington	63,485	0	0	0	0	0	0	0	2
Wheeling	56,208	6	0	0	0	0	47	0	0
North Carolina:									
Raleigh	30,371	4	0	0	0	0	1	0	0
Wilmington	37,061	3	1	0	0	0	1	0	0
Winston-Salem	69,031	4	0	3	0	0	44	3	0

[1] No estimate made.

City reports for week ended June 19, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—con									
South Carolina									
Charleston	73,125	0	1	0	7	0	1	0	1
Columbia	41,225	6	0	0	0	0	0	0	0
Greenville	27,311	1	0	1	0	1	0	0	0
Georgia									
Atlanta	(1)	3	1	1	1	0	42	0	9
Brunswick	16,809	0	0	0	0	0	2	0	0
Savannah	93,134	0	1	1	1	0	0	1	1
Florida									
Miami	69,754	0		0	0	0	10	2	6
Tampa	94,743	1	1	0	0	0	2	0	5
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	1	1	0	0	0	3	0	1
Louisville	305,935	1	3	0	1	0	9	0	4
Tennessee									
Memphis	174,533	2	1	1	0	1	49	3	4
Nashville	136,220	2	0	0	0	1	5	0	2
Alabama									
Birmingham	205,670	2	0	2	1	1	63	1	8
Mobile	65,955	0	0	0	0	0	0	0	0
Montgomery	46,481	0	0	0	0	0	5	2	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	1	0	0		0	0	
Little Rock	74,216	1	0	1	0	0	13	0	0
Louisiana									
New Orleans	414,493	0	5	3	2	4	2	0	7
Shreveport	57,857	0	0	1	0	0	1	0	0
Oklahoma									
Oklahoma City	(1)	0	1	0	4	0	0	0	1
Texas									
Dallas	194,450	11	2	2	0	1	1	1	0
Galveston	48,375	0	0	0	0	0	0	0	1
Houston	164,954	0	1	3	0	0	0	0	2
San Antonio	198,069	1	1	0	0	0	1	0	5
MOUNTAIN									
Montana									
Billings	17,971	0	0	0	0	0	0	0	0
Great Falls	29,883	3	1	5	0	0	23	0	0
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	0	0	1	0	0	0	1	1
Idaho									
Boise	23,042	1	0	0	0	0	1	2	0
Colorado									
Denver	280,911	28	10	6	0		12	2	6
Pueblo	43,787	10	2	0	0	0	32	0	2
New Mexico									
Albuquerque	21,000	0	1	1	0	0	1	1	0
Arizona									
Phoenix	38,669	0	0	1	0	0	1	0	0
Utah									
Salt Lake City	130,948	6	3	4	0	0	9	3	2
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	18	4	0	0		28	27	
Spokane	108,897	28	2	2	0		44	0	
Tacoma	104,455		2			0			1
Oregon									
Portland	282,383	7	4	6	0	1	36	5	7
California									
Los Angeles	(1)	31	35	20	3	1	11	12	9
Sacramento	72,260	1	2	5	0	0	2	2	5
San Francisco	557,530	13	18	6	0	0	126	6	6

[1] No estimate made.

City reports for week ended June 19, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths all causes
NEW ENGLAND											
Maine											
Portland	1	1	0	0	0	1	1	1	0	1	30
New Hampshire											
Concord	0	2	0	0	0	2	0	0	0	0	7
Manchester	0	2	0	0	0	1	0	0	0	0	15
Nashua	0	1	0	0	0	0	0	0	0	0	7
Vermont											
Barre	0	0	0	0	0	1	0	0	0	0	1
Burlington	0	0	0	0	0	0	0	0	0	1	8
Massachusetts											
Boston	34	51	0	0	0	8	2	5	0	46	176
Fall River	2	0	0	0	0	3	2	0	0	1	32
Springfield	4	8	0	0	0	0	0	0	0	2	26
Worcester	5	10	0	0	0	5	0	0	0	2	55
Rhode Island											
Pawtucket	1	0	0	0	0	0	0	0	0	0	11
Providence	4	1	0	0	0	1	1	1	0	3	62
Connecticut											
Bridgeport	5	8	0	0	0	4	0	0	0	3	23
Hartford	3	0	0	0	0	2	0	0	0	2	33
New Haven	2	5	0	0	0	1	0	1	0	11	32
MIDDLE ATLANTIC											
New York											
Buffalo	17	3	0	0	0	11	0	0	0	25	129
New York	130	233	0	0	0	[1] 132	14	15	1	66	1,278
Rochester	10	13	0	0	0	0	1	0	0	9	59
Syracuse	6	1	0	0	0	1	0	0	0	27	36
New Jersey											
Camden	2	7	0	0	0	0	1	0	0	1	18
Newark	13	39	0	0	0	7	0	1	1	19	80
Trenton	1	5	0	0	0	3	0	1	0	0	29
Pennsylvania											
Philadelphia	54	101	0	0	0	38	5	2	0	55	432
Pittsburgh	19	35	0	0	0	9	2	0	0	111	162
Reading	1	8	0	0	0	0	0	0	0	5	30
EAST NORTH CENTRAL											
Ohio											
Cincinnati	6	13	2	3	0	12	1	1	0	11	128
Cleveland	15	61	2	0	0	10	2	0	0	66	197
Columbus	4	20	2	1	0	5	1	0	0	16	60
Toledo	9	10	1	0	0	4	1	1	0	42	67
Indiana											
Fort Wayne	1	8	2	1	0	1	1	0	0	0	27
Indianapolis	7	12	6	9	0	10	1	0	0	27	107
South Bend	2	2	1	0	0	0	0	0	0	2	14
Terre Haute	2	4	1	0	0	0	0	0	0	2	20
Illinois											
Chicago	72	110	2	1	0	52	3	2	1	50	683
Peoria	2	0	1	0	0	0	0	0	0	10	13
Springfield	1	4	1	0	0	1	0	1	0	9	13
Michigan											
Detroit	49	112	5	0	0	25	3	0	0	56	306
Flint	3	16	1	0	0	2	1	0	0	6	18
Grand Rapids	3	13	0	0	0	2	0	0	0	10	27
Wisconsin											
Kenosha	0	3	1	0	0	1	0	0	0	5	7
Madison	1	2	0	0	0	2	0	1	0	2	--------
Milwaukee	18	15	5	0	0	9	0	0	0	44	118
Racine	2	5	1	0	0	1	0	1	0	8	16
Superior	2	2	2	0	0	1	0	0	0	0	8

[1] Pulmonary tuberculosis only

City reports for week ended June 19, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths all causes
WEST NORTH CENTRAL											
Minnesota											
Duluth	3	14	3	1	0	0	0	0	0	3	32
Minneapolis	20	61	8	0	0	2	1	0	0	2	101
St Paul	13	38	3	0	0	3	0	0	0	26	54
Iowa											
Davenport	0	0	3	0			0	0		0	
Des Moines	3	3	3	0			0	0			
Sioux City	1	9	2	3			0	0		3	
Waterloo	2	0	0	0			0	0		8	
Missouri											
Kansas City	4	9	3	2	0	5	0	0	0	3	85
St Joseph	0	0	0	1	0	1	0	0	0	0	25
St Louis	18	63	2	0	0	13	3	4	0	48	185
North Dakota											
Fargo	0	1	0	0	0	0	0	0	0	0	
Grand Forks	0		1				0				
South Dakota											
Aberdeen	1	5	0	0			0	0		12	
Sioux Falls	0	1	0	0	0	0	0	0	0	7	8
Nebraska											
Omaha	3	39	4	9	0	2	0	0	0	2	42
Kansas											
Topeka	1	2	1	0	0	0	0	0	0	0	7
Wichita	1	4	4	0	0	0	0	1	0	6	22
SOUTH ATLANTIC											
Delaware											
Wilmington	3	1	0	0	0	3	0	0	0	2	24
Maryland											
Baltimore	16	36	0	0	0	14	3	1	0	56	192
Cumberland	0	1	0	0	0	0	0	0	0	0	5
Frederick	0	0	0	0	0	0	0	0	0	0	3
District of Col											
Washington	11	16	0	2	0	15	2	0	0	39	143
Virginia											
Lynchburg	0		0				0				
Norfolk	1	1	0	0	0	1	0	0	0	23	
Richmond	1	5	0	1	0	4	1	0	0	0	50
Roanoke	1	1	0	1	0	0	1	0	0	0	14
West Virginia											
Charleston	1	0	0	0	0	0	1	0	0	3	6
Huntington	0	0	1	0	0	0	0	0	0	0	15
Wheeling	2	2	0	0	0	0	0	0	0	1	10
North Carolina											
Raleigh	0	0	0	3	0	0	0	0	0	16	13
Wilmington	0	0	0	0	0	1	0	1	0	13	11
Winston-Salem	0	1	1	0	0	1	1	0	0	2	15
South Carolina											
Charleston	0	0	0	1	0	4	1	3	0	1	26
Columbia	0	0	0	0	0	0	1	3	0	0	
Greenville	0	0	0	0	0	0	1	1	0	4	10
Georgia											
Atlanta	3	2	5	3	0	6	2	4	0	4	83
Brunswick	0	0	0	0	0	0	0	0	0	1	5
Savannah	1	0	0	1	0	2	2	0	0	0	30
Florida											
Miami		1		0	0	0		0	0	7	37
Tampa	0	3	0	4	0	0	1	0	0	0	33
EAST SOUTH CENTRAL											
Kentucky											
Covington	0	0	0	0	0	0	0	0	0	0	19
Louisville	3	5	0	0	0	7	1	2	0	2	72
Tennessee											
Memphis	2	2	1	0	0	7	2	1	0	3	64
Nashville	1	0	1	1	0	3	2	0	0	2	38
Alabama											
Birmingham	1	1	3	1	0	4	3	1	0	18	59
Mobile	0	0	1	0	0	2	1	0	0	0	24
Montgomery	0	1	0	0	0	0	1	0	0	2	

City reports for week ended June 19, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	0	0	0	0	-------	-------	1	0	-------	6	-------
Little Rock	0	7	0	1	0	3	1	0	0	0	-------
Louisiana											
New Orleans	2	3	1	0	0	12	4	4	2	14	139
Shreveport	0	0	0	1	0	4	1	1	0	0	29
Oklahoma											
Oklahoma City	1	0	4	0	0	0	1	2	0	0	25
Texas											
Dallas	1	2	1	4	0	1	2	0	0	18	48
Galveston	0	0	0	0	0	1	0	0	0	0	17
Houston	0	1	1	0	0	3	1	0	0	0	56
San Antonio	0	3	0	0	0	5	1	2	2	0	67
MOUNTAIN											
Montana											
Billings	1	1	0	0	0	0	0	0	0	0	6
Great Falls	2	1	1	0	0	0	1	0	0	0	5
Helena	0	0	0	0	0	0	0	0	0	0	2
Missoula	0	0	0	0	0	0	0	0	0	0	10
Idaho											
Boise	1	0	0	2	0	0	0	0	0	0	4
Colorado											
Denver	7	9	0	0	0	7	0	0	0	19	50
Pueblo	1	0	0	0	0	1	0	0	0	0	8
New Mexico											
Albuquerque	0	0	0	1	0	3	0	0	0	9	15
Arizona											
Phoenix	1	0	0	0	0	6	1	0	0	0	16
Utah											
Salt Lake City	2	3	1	1	0	6	1	0	0	55	33
Nevada											
Reno	0	0	0	0	0	0	0	0	0	0	2
PACIFIC											
Washington											
Seattle	9	16	3	1	-------	-------	1	0	-------	12	-------
Spokane	4	16	3	1	-------	-------	0	0	-------	10	-------
Tacoma	2	-------	2	-------	0	1	0	-------	0	-------	16
Oregon											
Portland	6	22	7	9	0	3	0	1	0	1	74
California											
Los Angeles	16	38	3	3	0	16	2	1	0	10	182
Sacramento	0	1	1	2	0	1	0	1	0	1	28
San Francisco	11	6	2	0	0	11	1	1	1	4	169

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis (infantile paralysis): Cases	Poliomyelitis (infantile paralysis): Deaths
NEW ENGLAND									
Connecticut									
Hartford	1	1	0	0	0	0	0	0	0
MIDDLE ATLANTIC									
New York									
New York [1]	1	1	5	0	0	0	0	1	0
Rochester	0	0	1	0	0	0	0	0	0
New Jersey:									
Camden	0	0	0	1	0	0	1	0	0
Newark	0	0	1	0	0	0	0	1	0

[1] Typhus fever, 1 case in New York City.

City reports for week ended June 19, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio									
Columbus	0	0	0	1	0	0	0	0	0
Illinois									
Chicag	1	1	0	0	0	1	1	1	0
Michigan									
Detroit	2	0	0	0	0	1	0	0	0
Wisconsin									
Milwaukee	1	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota									
Minneapolis	1	0	0	0	0	0	0	0	0
St Paul	0	0	1	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland									
Baltimore	0	0	2	1	0	0	0	0	0
District of Columbia									
Washington	0	0	0	0	1	1	0	0	0
Virginia									
Norfolk	1	0	0	0	0	0	0	0	0
West Virginia:									
Huntington	0	0	0	0	0	0	0	0	1
North Carolina									
Raleigh	0	1	0	0	0	0	0	0	0
South Carolina:									
Charleston [2]	0	0	0	0	1	1	0	0	0
Georgia									
Atlanta	0	0	0	0	2	0	0	0	0
Savannah	0	0	0	0	0	3	0	0	0
Florida									
Tampa	1	1	0	0	0	0	0	0	0
EAST SOUTH CENTRAL									
Alabama									
Birmingham	0	0	1	0	1	1	0	0	0
Mobile	0	0	0	0	0	2	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	3	0	0	0
Louisiana									
New Orleans	0	0	0	0	1	1	0	0	0
Shreveport	0	0	0	0	0	2	0	0	0
Texas.									
Dallas	0	0	0	0	0	2	0	1	1
Houston	0	0	0	1	0	0	0	0	0
MOUNTAIN									
Montana:									
Great Falls	1	0	0	0	0	0	0	0	0
Missoula	2	1	0	0	0	0	0	0	0
New Mexico									
Albuquerque	0	0	0	0	1	0	0	0	0
PACIFIC									
Washington:									
Spokane	2	0	0	0	0	0	0	0	0
Oregon									
Portland	1	2	0	0	0	0	0	0	0
California:									
Los Angeles	0	0	0	0	0	1	0	0	0
San Francisco	0	0	0	0	0	1	1	0	0

[2] Dengue, 2 cases at Charleston, S C.

The following table gives the rates per 100,000 population for 103 cities for the five-week period ended June 19, 1926, compared with those for a like period ended June 20, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 103 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926 The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below

Summary of weekly reports from cities, May 16 to June 19, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended									
	May 23, 1925	May 22, 1926	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926
103 cities	118	[2] 117	[3] 144	[2] 122	[4] 152	[2] 117	116	[5] 138	114	[6] 113
New England	122	78	110	80	125	78	91	69	93	78
Middle Atlantic	202	138	210	145	243	134	155	155	166	124
East North Central	101	117	100	108	92	119	89	[8] 147	86	131
West North Central	243	[2] 145	187	[2] 163	183	[2] 207	141	[9] 289	129	[2] 167
South Atlantic	83	71	[3] 72	96	[4] 88	47	54	60	48	[10] 66
East South Central	37	36	11	42	11	16	11	26	5	16
West South Central	40	47	62	65	40	56	66	47	70	43
Mountain	129	127	139	127	74	109	176	127	185	146
Pacific	157	164	160	159	138	132	157	159	108	[11] 94

MEASLES CASE RATES

103 cities	579	[2] 1,434	[3] 569	[2] 1,283	[4] 594	[2] 1,014	558	[5] 864	416	[6] 372
New England	1,014	1,075	836	1,064	841	728	860	[7] 662	611	494
Middle Atlantic	615	1,133	701	956	771	751	724	797	542	585
East North Central	888	1,372	839	1,252	825	1,103	779	[8] 988	547	943
West North Central	233	[2] 3,437	137	[2] 3,061	111	[2] 2,209	131	[9] 1,552	84	[2] 1,260
South Atlantic	309	1,659	[3] 242	1,542	[4] 393	1,213	280	1,103	330	[10] 788
East South Central	310	2,999	200	2,370	121	1,660	194	1,396	105	695
West South Central	22	142	13	112	22	86	13	125	18	77
Mountain	176	1,384	240	1,302	37	1,247	92	919	74	701
Pacific	124	693	157	803	157	096	83	593	80	[11] 602

SCARLET FEVER CASE RATES

103 cities	297	[2] 309	[3] 267	[2] 274	[4] 256	[2] 231	170	[5] 256	159	[6] 233
New England	338	288	204	258	276	248	173	[7] 256	137	203
Middle Atlantic	264	256	270	212	262	209	155	195	144	221
East North Central	388	341	321	339	293	247	198	[8] 332	202	340
West North Central	539	[2] 721	514	[2] 695	466	[2] 416	315	[9] 673	317	[2] 480
South Atlantic	138	195	[3] 115	160	[4] 125	190	58	160	58	[10] 131
East South Central	226	176	168	171	116	195	147	78	147	47
West South Central	44	172	62	116	84	163	44	86	35	69
Mountain	314	173	398	100	324	218	268	118	139	127
Pacific	155	294	133	181	141	170	155	237	110	[11] 220

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported Populations used are estimated as of July 1, 1925 and 1926, respectively
[2] Grand Forks, N Dak, not included
[3] Charleston, W. Va, not included
[4] Wilmington, N C, not included
[5] Barre, Vt, Madison, Wis, St Paul, Minn, Kansas City, Mo, Fargo, N Dak, and Grand Forks, N Dak, not included
[6] Grand Forks, N Dak., Lynchburg, Va and Tacoma, Wash, not included
[7] Barre, Vt, not included
[8] Madison, Wis, not included
[9] St. Paul, Minn, Kansas City, Mo, Fargo, N Dak, and Grand Forks, N Dak, not included
[10] Lynchburg, Va, not included
[11] Tacoma, Wash, not included

Summary of weekly reports from cities, May 16 to June 19, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925—Continued

SMALLPOX CASE RATES

	Week ended									
	May 23, 1925	May 22, 1926	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926
103 cities	58	[2] 18	[3] 47	[2] 19	[4] 45	[2] 15	36	[5] 17	35	[6] 11
New England	0	0	0	0	0	0	0	[7] 0	[illegible]	0
Middle Atlantic	2	0	2	1	4	0	2	0	[illegible]	0
East North Central	66	18	54	13	61	9	40	[8] 12	[illegible]	[illegible]
West North Central	66	[2] 28	68	[2] 44	92	[2] 40	50	[9] 34	29	[illegible]
South Atlantic	61	24	[3] 10	28	[4] 37	34	21	31	184	[illegible]
East South Central	404	62	389	62	105	83	273	52	18	[illegible]
West South Central	123	95	53	99	31	43	4	34	[illegible]	26
Mountain	28	18	55	36	37	27	28	46	18	27
Pacific	177	51	160	32	182	24	141	34	146	[11] 20

TYPHOID FEVER CASE RATES

	May 23, 1925	May 22, 1926	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926
103 cities	18	[2] 11	[3] 15	[2] 10	[4] 24	[2] 9	27	[5] 12	21	[6] 11
New England	24	9	17	7	29	0	24	[7] 17	19	19
Middle Atlantic	19	7	9	5	26	9	17	6	11	9
East North Central	5	5	7	9	9	5	9	[8] 4	6	4
West North Central	4	[2] 8	10	[2] 4	8	[2] 8	24	[9] 5	12	[2] 10
South Atlantic	36	32	[3] 39	26	[4] 39	32	61	26	46	[10] 25
East South Central	68	10	47	31	37	10	110	37	74	21
West South Central	62	26	62	13	84	9	110	52	123	30
Mountain	18	9	9	0	74	9	46	9	37	0
Pacific	6	19	8	11	8	8	14	13	6	[11] 9

INFLUENZA DEATH RATES

	May 23, 1925	May 22, 1926	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926
96 cities	14	15	[3] 12	12	[4] 10	8	7	[12] 10	6	[10] 7
New England	5	12	7	9	2	2	5	[7] 12	2	9
Middle Atlantic	11	16	9	11	11	6	6	9	4	9
East North Central	11	18	13	11	10	8	6	[8] 10	7	3
West North Central	17	8	17	13	4	8	8	[13] 3	6	4
South Atlantic	6	11	[3] 12	11	[4] 6	8	4	6	6	[10] 4
East South Central	79	36	37	26	47	36	16	36	32	16
West South Central	19	24	29	9	5	14	19	19	10	24
Mountain	18	0	0	9	28	18	9	9	0	0
Pacific	22	4	7	11	11	4	4	0	4	4

PNEUMONIA DEATH RATES

	May 23, 1925	May 22, 1926	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926
96 cities	123	141	[3] 119	[3] 120	[4] 123	[4] 105	99	[12] 95	78	[10] 87
New England	110	144	110	123	69	116	113	[7] 102	60	87
Middle Atlantic	143	173	145	145	167	130	130	109	93	95
East North Central	116	133	111	106	107	98	79	[8] 87	76	74
West North Central	76	94	57	83	55	50	57	[13] 48	32	75
South Atlantic	125	148	[3] 147	[3] 111	[4] 138	[3] 80	115	96	75	[10] 112
East South Central	126	171	158	171	116	125	58	125	95	99
West South Central	73	90	73	109	63	99	82	94	87	71
Mountain	166	82	74	91	92	146	102	82	139	100
Pacific	120	53	73	64	116	67	44	67	58	75

[2] Grand Forks, N Dak, not included.
[3] Charleston, W. Va, not included
[4] Wilmington, N C, not included
[5] Barre, Vt, Madison, Wis, St Paul, Minn, Kansas City, Mo, Fargo, N Dak, and Grand Forks, N Dak, not included
[6] Grand Forks, N Dak, Lynchburg, Va, and Tacoma, Wash, not included
[7] Barre, Vt, not included
[8] Madison, Wis, not included
[9] St. Paul, Minn, Kansas City, Mo, Fargo, N. Dak, and Grand Forks, N. Dak, not included.
[10] Lynchburg, Va, not included
[11] Tacoma, Wash, not included
[12] Barre, Vt, Madison, Wis, St Paul, Minn, Kansas City, Mo, and Fargo, N Dak., not included.
[13] St Paul, Minn., Kansas City, Mo, and Fargo, N Dak, not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	103	96	29,914,996	30,473,129	29,251,658	29,764,201
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	14	11	2,594,962	2,634,662	2,461,380	2,499,036
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended June 5, 1926.—The following report for the week ended June 5, 1926, was transmitted by the far eastern bureau of the health section of the League of Nations' Secretariat, located at Singapore, to the headquarters at Geneva.

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Iraq. Basrah	0	0	0	0	6	5
Ceylon Colombo	1	1	0	0	0	0
British India						
Bombay	--------	4	--------	0	30	17
Madras	--------	0	--------	1	0	0
Karachi	--------	3	--------	0	5	2
Negapatam	--------	0	--------	2	1	1
Vizagapatam	--------	0	--------	0	1	0
Siam Bangkok	0	0	146	60	4	5
French Indo-China						
Saigon and Cholon	4	2	29	22	0	0
Haiphong	0	0	58	51	0	0
Hongkong	0	0	0	0	2	1
China						
Shanghai	0	0	1	0	0	0
Amoy	11	--------	0	0	1	0
Japan Simonoseki	0	0	0	0	1	0
Kwantung Dairen	0	0	0	0	6	2

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

British India.—Chittagong, Cochin, Tuticorin.

Federated Malay States—Port Swettenham

Straits Settlements—Penang, Singapore.

Dutch East Indies.—Batavia, Surabaya, Samarang, Cheribon, Belawan Deli, Palembang, Sabang, Makassar, Menado, Banjermasin, Balik-Papan, Tarakan, Pontianak, Padang.

Sarawak—Kuching.

British North Borneo—Sandakan.

Portuguese Timor—Dilly

Philippine Islands—Manila, Iloilo, Jolo, Cebu, Zamboanga.

French Indo-China—Turane

Formosa—Keelung.

Japan—Nagasaki, Yokohama, Osaka, Moji, Kobe, Niigata, Tsuruga, Hakodate.

Korea.—Chemulpo, Fusan.
Kwantung.—Port Arthur.
Manchuria.—Antung, Mukden, Changchun, Harbin.
U. S. S. R.—Vladivostok.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.
New Guinea.—Port Moresby.
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia.—Noumea.
Hawaii.—Honolulu.

AFRICA

Egypt.—Alexandria, Port Said, Suez.
Anglo-Egyptian Sudan.—Port Sudan.
Eritrea.—Massaua.
French Somaliland.—Jibuti.
British Somaliland.—Berbera.
Italian Somaliland.—Magadiscio.
Kenya.—Mombasa.
Tanganyika.—Dar-es-Salaam.
Seychelles.—Victoria.
Mauritius.—Port Louis.
Madagascar.—Tamatave, Majunga.
Zanzibar.—Zanzibar.
Portuguese East Africa.—Mozambique, Beira, Lorenço Marques.
Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from:

British India.—Rangoon, Calcutta.

CHINA

Smallpox—Typhus fever—Chungking district.—Under date of May 1, 1926, smallpox and typhus fever were reported among the military at Wanhsein, in the consular district of Chungking, China. A death from typhus fever was reported at Ichang, in a member of the foreign population.

GREAT BRITAIN (SCOTLAND)

Prevalence of certain infectious diseases—Glasgow—April 25–May 29, 1926.—During the five-week period ended May 29, 1926, 515 cases of measles with 34 deaths were reported at Glasgow,[1] Scotland; diphtheria including membranous croup and scarlet fever were reported prevalent with 215 cases and 373 cases, respectively; lethargic encephalitis acute, with 11 cases, tuberculosis (pulmonary), 220 cases; other forms of tuberculosis, 146 cases. Population, estimated, 1,034,500.

[1] Public Health Reports, Jan. 22, 1926, p. 154, Apr. 2, 1926, p. 639, May 7, 1926, p. 910, June 18, 1926, p. 1258.

GREECE

Plague—Patras—May 27, 1926.—Two cases of plague, one of which terminated fatally, were reported at Patras, Greece, May 27, 1926. The cases occurred in the same family and in a quarter of the city not far from the customhouse and the port.

INDIA

Plague-infected rats—Rangoon—January–April, 1926.—During the four-month period, January to April, 1926, inclusive, 57 plague-infected rats were reported found at Rangoon, India. During the same period, 140 cases of plague with 129 deaths were reported at Rangoon, of which 12 cases were stated to have been imported.

LATVIA

Communicable diseases—April, 1926.—During the month of April, 1926, communicable diseases were reported in the Republic of Latvia as follows:

April, 1926

Disease	Cases	Disease	Cases
Diphtheria	68	Rabies	2
Dysentery	4	Scarlet fever	306
Lethargic encephalitis	1	Smallpox	3
Malaria	1	Tetanus	2
Measles	184	Tuberculosis	61
Mumps	40	Typhoid fever	47
Paratyphoid fever	4	Whooping cough	56
Puerperal fever	7		

Population estimated, 1,850,000

MADAGASCAR

Plague—April 1-15, 1926.—During the period April 1 to 15, 1926, 42 cases of plague with 30 deaths were reported in the Island of Madagascar. The types of the disease were: Bubonic with 14 cases, pneumonic, 18 cases, septicemic, 10 cases. For distribution of occurrence, according to locality, see page 1458.

MALTA

Communicable diseases—May 1-31, 1926.—During May, 1926, communicable diseases were reported in the Island of Malta as follows: Bronchopneumonia, 7 cases; chicken pox, 45; diphtheria, 7; erysipelas, 6; influenza, 4; lethargic encephalitis, 3; Malta (undulant) fever, 41; measles, 96; pneumonia, 20; scarlet fever, 1; trachoma, 80; tuberculosis, 20, typhoid fever, 20; whooping cough, 12. Population, civil, estimated, 223,088.

MEXICO

Gastroenteritis—Chihuahua.—During the period May 25 to June 13, 1926, gastroenteritis was reported present at Chihuahua, Mexico The water supply of the city was stated to be unfiltered

Smallpox—San Antonio de Arenales—During the period January to June, 1926, smallpox was reported present, with a number of cases, in a community settlement at San Antonio de Arenales, situated about 100 miles distant from Chihuahua

TUNISIA

Plague—Kairouan and vicinity.—Under date of June 9, 1926, 12 cases of plague with 8 deaths were reported in Tunisia. Of these, three cases occurred in the city of Kairouan and nine cases in a territory 30 miles south of Kairouan. It was stated that a sanitary cordon had been established and that an intensive campaign of antiplague inoculation was being carried out

UNION OF SOUTH AFRICA

Plague—Cape Province—Orange Free State—May 9-15, 1926.—During the week ended May 15, 1926, plague was reported in the Union of South Africa as follows *Cape Province*—Three European cases, of which two ended fatally, occurring at a farm in the Middelburg District, *Orange Free State*—one fatal case, native, at Protestpan, 15 miles distant from Bultfontein.

Typhus fever—April, 1926—During the month of April, 1926, 85 cases of typhus fever, with 14 deaths, occurring in the colored population, and 2 cases in the European population, were reported in the Union of South Africa. For distribution of occurrence, according to province, see page 1459.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended July 9, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
India				Apr 25-May 1, 1926 Cases, 2,880 deaths, 1,943
Calcutta	May 9-22	112	103	
Madras	May 16-22	1		
Rangoon	May 9-15	5	1	
Siam				
Bangkok	do	327	173	

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended July 9, 1926—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Greece				
Patras	May 27	2	1	In same family, locality vicinity of port
India				Apr 25-May 1, 1926. Cases, 7,671, deaths, 1,764
Bombay	May 9-15	4	3	
Karachi	May 23-29	1	1	
Madras Presidency	Apr 25-May 1	16	13	
Rangoon	May 9-15	4	3	Plague-infected rats, January-April, 1926 57
Madagascar				Apr 1-15, 1926 Cases, 42, deaths, 39
Moramanga Province	Apr 1-15	2	2	Septicemic
Tananarive Province—				
Tananarive Town	do	3	3	Pneumonic and septicemic
Other localities	do	37	34	Bubonic, pneumonic, septicemic
Tunisia				
Kairouan	June 9	3		In territory 30 miles south of Kairouan, 9 cases
Union of South Africa				
Cape Province—				
Middelburg District	May 9-15	3	2	Occurring on farm In Europeans
Orange Free State—				
Protestpan	do	1	1	In native Locality 15 miles from Bultfontein

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Brazil				
Rio de Janeiro	May 16-22	31	13	
China				
Dairen	Apr 26-May 9	31	6	
Harbin	May 14-27	14		
Shanghai	May 16-22	5	19	Cases, foreign, deaths, foreign and Chinese, in International Settlement and French Concession
Wanshein	May 1			Locality, Chungking consular district Present among troops
Egypt				
Alexandria	May 15-21	5		
Great Britain				
England—				
Newcastle-on-Tyne	June 6-12	1		
India				Apr 25-May 1, 1926 Cases, 6,675, deaths, 1,719
Bombay	May 9-15	32	12	
Calcutta	May 9-22	32	22	
Karachi	May 16-29	24	8	
Madras	May 16-29	5	3	
Rangoon	May 9-15	2	1	
Iraq				
Basra	May 9-22	11	9	
Java				
East Java and Madoera	Apr. 18-May 1	9		
Latvia	Apr 1-30	3		
Mexico				
Mexico City	May 30-June 5	1		Including municipalities in Federal District.
San Antonio de Arenales	Jan 1-June 30			Present in community settlement 100 miles distant from Chihuahua
Poland				Apr 11-May 1, 1926 Cases, 7
Portugal				
Lisbon	Apr 26-May 23		3	
Oporto	May 31-June 5	1		
Siam				
Bangkok	May 9-15	1	1	
Straits Settlements				
Singapore	Apr. 25-May 1	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended July 9, 1926—Continued

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
China.				
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanhsien				Present among troops, May 1, 1926 Locality in Chungking consular district
Mexico				
Mexico City	May 31–June 5	11		Including municipalities in Federal District
Poland				Apr 5–May 1, 1926 Cases, 382, deaths, 30
Union of South Africa				April, 1926 Cases, 85, deaths, 14 (colored), European, 2 cases Total, 87 cases, 14 deaths
Cape Province				Apr 1–30, 1926 Cases, 71, deaths, 11 Native
Do	May 9–15			Outbreaks
Grahamstown	do	1		Sporadic
Natal				Apr 1–30, 1926 Cases, 4 Native
Orange Free State				Apr 1–30, 1926 Cases, 7 Native
Transvaal				Apr 1–30, 1926 Cases, 3, deaths, 3 Native

Reports Received from June 26 to July 2, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
India				
Calcutta	Apr 4–May 8	308	276	
Indo-China				
Saigon	May 2–8	20	18	
Siam				
Bangkok	do	255	143	

PLAGUE

Place	Date	Cases	Deaths	Remarks
China				
Amoy	Apr 18–May 1, 1926			Prevalent.
Nanking	May 9–22			Do.
Egypt				May 21–27, 1926 Cases, 4. Jan 1–May 27, 1926 Cases 43.
City—				
Suez	May 21–27	2		
Do	May 28–30	4	3	Bubonic, 1 case, 2 deaths; 1 case, 1 death, pneumonic
Province—				
Beni-Suef	May 28–June 3	5	2	Bubonic and septicemic.
Gharbieh	June 2	1	1	Bubonic
Greece				
Athens	Apr 1–30	7	2	Including Piraeus
Do	May 1–31	9	2	Do.
Zante	May 17	1		
India				
Bombay	May 2–8	1	1	
Iraq				
Bagdad	Apr 18–May 15	83	56	
Java				
Batavia	Apr 24–May 7	21	21	
Cheribon	Apr. 11–24	3	3	

[1] From medical officers of the Public Health Service, American consuls, and other sources For reports received from Dec 26, 1925, to June 25, 1926, see Public Health Reports for June 25, 1926 The tables of epidemic diseases are terminated semiannually and new tables begun

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 2, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	May 21-31	4		
Brazil				
Para	May 16-29	6	7	
Rio de Janeiro	May 2-15	45	11	
Santos	Mar 1-7		1	
Canada				May 30-June 12, 1926 Cases, 46
Alberta	May 30-June 12	3		
Manitoba	do	12		
Winnipeg	June 6-12	5	1	
Ontario				May 30-June 12, 1926 Cases, 24
Kingston	May 23-29	3		
North Bay	May 2-22	5		
Saskatchewan				May 30-June 12, 1926 Cases, 7.
China				
Chungking	May 2-15			Present
Foochow	May 9-22			Do
Hongkong	May 2-15	4	3	
Manchuria—				
An-shan	May 16-22	1		South Manchuria Ry
Antung	do	2		Do
Changchun	do	2		Do
Fushun	do	3		Do
Kai-yuan	do	1		Do
Liao-yang	do	2		Do
Mukden	do	1		Do
Penhsihu	do	2		Do
Teshihchiao	do	1		Do
Wa-feng-tien	do	3		Do
Nanking	May 8-22			Present
Shanghai	May 2-15	2	5	Cases, foreign Deaths, population of international concession, foreign and native.
Swatow	May 9-15			Sporadic
Great Britain				
England—				
Bradford	May 23-29	1		
India.				
Bombay	May 2-8	24	12	
Calcutta	Apr 4-May 8	133	128	
Iraq				
Bagdad	May 9-15	1		
Basra	Apr 18-May 8	9	4	
Japan				
Nagoya	May 16-22		1	
Taiwan Island	May 11-20	24		
Yokohama	May 2-8	2		
Java				
East Java and Madoera	Apr 11-17	4		
Malang	Apr 4-10	6	1	Interior
Mexico				
Guadalajara	June 8-14		2	
Mexico City	May 16-22	2		Including municipalities in Federal District
Tampico	June 1-10		2	Varioloid
Torreon	May 1-31		10	
Poland				Apr 4-10, 1926 Cases, 7
Portugal				
Oporto	May 23-29	3		
Siam:				
Bangkok	May 2-8	1	4	
Union of South Africa				
Transvaal—				
Johannesburg	May 9-15	1		

TYPHUS FEVER

Algeria				
Algiers	May 21-31	2	1	
Chile				
Antofagasta	May 23-29	3		
Ireland (Irish Free State).				
Cork	June 5	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 2, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Mexico				
Mexico City	May 16-22	9		Including municipalities in Federal District
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-Apr 10, 1926 Cases, 191, deaths, 18

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil				
Bahia	May 9-22	3	2	

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TREASURY DEPARTMENT

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VOLUME 41 :: :: NUMBER 29

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1926

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen B J LLOYD, *Chief of Division*

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PUBLIC HEALTH REPORTS

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THE SO-CALLED ACTION OF ACID SODIUM PHOSPHATE IN DELAYING THE ONSET OF FATIGUE

By FREDERICK B FLINN, Associate Physiologist, Office of Industrial Hygiene and Sanitation, United States Public Health Service

Introduction

Emden's report (1) regarding the effects of acid sodium phosphate administered to German soldiers during the late war, to miners, and to animals, for the purpose of delaying the onset of fatigue, aroused considerable interest in the public mind. The study presented in this paper was prompted by the desire to determine, if possible, whether or not the results reported by Emden were generally applicable or were due to conditions peculiar to Germany and other European countries on account of the late war

The position that phosphate occupies in the metabolism of the muscle has been investigated by various workers in the past. The production of an excess of acid sodium phosphate during exercise was suggested by Lee and others as being one of the factors in causing fatigue in the isolated muscle as indicated by a lowered muscular efficiency. MacLeod (1899) (2), studying the distribution of the inorganic and organic phosphate in the muscle of dogs exercised in a treadmill, found that there was a decrease in the water soluble organic phosphate with a corresponding increase in the inorganic phosphate. At a later date (1914) he was inclined to explain these results as being due to the action of the lactic acid, formed during exercise, on the organic compound.

Meigs (3), in discussing the function of inorganic phosphate in the physiology of striated muscle, suggests that the relaxation of the contracted muscle is brought about by the combining of the lactic acid with the potassium phosphate contained in the muscle fiber. That there is a relationship between the lactic acid and phosphoric acid in the muscle is apparently confirmed by the work of Emden and his school. They report that if the skeletal muscle of the dog is kept standing in bicarbonate at 40° C., phosphoric as well as lactic acid will be liberated, and, further, that under certain easily maintained experimental conditions the newly formed phosphoric acid is almost equimolecular with the newly formed lactic acid. On the basis of this evidence they were led to the conclusion that there is present in the muscle a special lactic acid forming substance, different from the usual carbohydrate, to which they have given the name "lactacidogen."

The reactions of this substance resemble very closely the reactions of hexophosphoric acid formed during alcoholic yeast fermentation. If any one of the carbohydrates is added to pressed muscle juice there is no increase in the production of lactic acid, while if the sodium salt of this hexose-phosphoric acid from yeast is added to the pressed muscle juice, it decomposes into lactic and phosphoric acids.

Encouraged by his research on "lactacidogen," Emden attempted, during the late war, to increase the muscular efficiency of the German soldier by the oral administration of acid sodium phosphate in sublaxative doses. The results he reported were impressive, and again in his laboratory he showed a sharp rise in the amount of work done on the bicycle ergometer by the soldier after an administration of this salt The effect of the phosphate lasted, in most of his experiments, for 48 hours, and frequently showed a further rise in the amount of work done in the second 24 hours over the first 24 hours. It was his custom to give the phosphate in a 4 per cent cane-sugar solution, which introduces another factor in view of the claim that cane sugar, under certain conditions, will give an increased muscular efficiency.

His reasoning as to the oral administration of acid sodium phosphate for the purpose of delaying the onset of fatigue or for producing greater muscular efficiency is not quite clear to us, especially when we take into consideration all the known facts about the metabolism of phosphates. It appears to be the consensus of opinion that ordinary activity or vigorous exercise by a trained man does not increase the excretion of phosphorus. It is only when the exercise is so strenuous as to cause tissue destruction that an excess outgo of phosphorus and other tissue katabolites occurs. The greatest excretion of phosphorus occurs in this case after the termination of the exercise and may persist for several days. Lehmen (4) found that the inorganic phosphate in rabbit's blood remained constant within biological limits, while if through any means it should be increased to four or five times the normal concentration it would return to normal inside of four hours. We ourselves have examined the blood of dogs within an hour and a half after the oral administration of sublaxative amounts of acid sodium phosphate and could not detect any increase in the phosphate content of the blood. Underhill (5), working with solutions of mono-, di-, and tri-sodium phosphate, which he injected subcutaneously, found considerable increase in the urinary phosphate, 70 to 100 per cent of the injected phosphate being recovered in the urine. He also noted that the character of the diet and nature of the phosphate had no apparent influence on the percentage of the injected phosphate excreted in the urine. Again, Meigs and coworkers (6) call attention to the fact that the urinary excretion of phosphorus is actively influenced by the concentration of the inorganic

phosphate in the blood plasma. Their results indicated that it is influenced by another factor, which was connected with the acid equilibrium of the body. Kingo Goto (7) seems to have confirmed this last observation by showing that the muscle lost markedly in phosphorus and potassium and somewhat in sodium during acidosis.

It may be that Emden's subjects, on account of the nutritional conditions, underwent greater tissue destruction than would occur in a well-nourished man, and that the phosphorus requirements of the body were satisfied by the intake of the acid sodium phosphate. Bauer (8) writes: "As a rule we take in with our food a far larger quantity of salts than is necessary for the replacement of those of the tissues. The excess is excreted with the urine, and only when an increase in the body weight occurs is any large amount of salts retained in the body." According to Sherman (9), in 41 per cent of 150 dietaries of American families or larger groups examined, and which were believed to be fairly representative, the phosphorus content was found to be below the standard.

Present Study

Outline of present study.—It was decided to divide the study into three parts, as follows:

(1) Animal experiments.

(2) Subjective experiments in which the more general physiological effects of acid sodium phosphate were studied

(3) A study of the increase in production in man. During this part of the study we purposely refrained from asking any questions of those participating in the test, so as to avoid introducing any psychological factor into the experiment.

Preparation and administration of the acid sodium phosphate.—The phosphate was dissolved in a 4 per cent cane-sugar solution in sufficient quantity to make a 15 per cent solution of the salt, so as to duplicate Emden's dosage. Each subject was tested as to his or her tolerance toward the salt, as it was our aim to keep the dosage down to sublaxative amounts. Our experience indicates that in human beings this dosage varies from 2½ to 7 grams. Once the dosage was determined for the individual, it was not found necessary to change the amount during the study. Any increase was sure to produce a laxative effect. As a rule, the salt was taken each morning before beginning work. Those participating in the production part of the study took the salt about breakfast time.

1. ANIMAL EXPERIMENTS

Our animal experiments proved disappointing, inasmuch as we were unable to arrive at any satisfactory base line from which to start in judging the effect on work production of an administration of acid sodium phosphate.

We used the Dourdouro strain of the albino rat in these experiments. Male rats varying in weight from 200 to 300 grams were selected and tested as to their willingness to run in the mill. These rats were placed on a balanced diet for two weeks before they were subjected to a training period. This training period consisted in running the rats for a short period each day until they had lost their flabbiness and their muscle became firm. The weights of the rats remained constant or increased slightly during the period that they were being conditioned for the actual fatigue tests.

Apparatus.—We made use of the revolving drum for fatiguing the rats. The apparatus consisted of six drums, 16 inches in diameter and 10 inches wide, driven at a uniform speed by an electric motor, which permitted us to exercise six rats at the same time. These drums were built of one-quarter-inch-mesh galvanized wire net and were lined over three-fourths of the width with corrugated rubber matting. This was necessary because it was found that when the rats ran for a long period on the naked wire their feet became sore. It also had an advantage, as it prevented their hanging on to the wire netting and being carried around with the cage, and which, as a rule, resulted in torn toenails.

The rate at which the drums should revolve received considerable attention, and it was finally decided after much experimental observation to turn them at a speed of eight revolutions per minute. This kept the rats moving at what appeared to be a natural running gait; whereas if the speed were increased very much they became bewildered, clung to the sides of the wheel, and were thrown around and fatigued more from the rough treatment than from physical exercise.

The question which concerned us most in the animal work was the standard by which we could measure the fatigue of the rat or even determine whether the rat was really fatigued or not. It was finally decided that the rat should be kept running until it lay down on its back and did not respond to any external knocks on the side of the drum. Then, if on removal from the drum it was content to remain quiet and showed no interest in food placed near it, we considered it fatigued.

When the rats were first placed in the drum after the hardening period, it was found that they were unable to run for a longer time than six hours as determined by our adopted standard. With each successive period of running there was an increment in the running time of from three to six hours. As soon as they were able to run steadily for 24 hours, we decided to stop the drum every six hours to permit the rat to rest, eat, and drink a little. This rest period never amounted to more than half an hour each time. This procedure was considered necessary as otherwise the element of exhaustion from thirst and starvation would have complicated the results. In spite

of all precautions we were unable to arrive at a base line. Rats that would run for 50 hours would jump to 90 hours in the next running period. On the other hand, rats that had run 50 hours would drop down to 10 and 12 hours. Autopsies on some of the rats suggested that the variations in length of runs were due to pathological heart conditions.

After working with the rats for three months we decided to abandon this part of the study because of the inadvisability of proceeding with experiments in which no normals or base lines could be obtained. Our previous work with dogs did not encourage us to use them in the place of rats.

2. SUBJECTIVE EXPERIMENTS

For the purpose of studying the general physiological effects of the salt on human beings, we were fortunate in having 40 persons volunteer to take the salt under our direction for a period of two months. This group consisted of medical men, scientific workers, stenographers, and laboratory attendants. From time to time we substituted acid sodium tartrate solution without telling the individual that it was being done As a check on their subjctive observations we kept a record of body weight and blood pressure. The value of these data was proved in various instances and was interesting from a psychological viewpoint. On the whole, our reports thoroughly confirmed the worthlessness of most subjective studies in this field, but in this mass of contradictory evidence certain points stand out clearly, and only these need be considered here.

The consensus of opinion is that the group, as a whole, felt better for the taking of the phosphate and none felt any ill effect. All agreed that the reason for the general improvement was a more regular evacuation of the bowel. This is not surprising when one considers the great majority of persons in our own country who are suffering from various degrees of constipation. Acid sodium phosphate is recognized by the medical profession as having a laxative effect. The profession has also used this salt in the treatment of pyelitis, either to render the urine acid or to increase its acidity for the purpose of assisting the action of hexamethylentetramine, which is active only in acid solution. Acid sodium phosphate is more pleasant to take then other saline laxitive; it is positive in its effects, without the griping and uncomfortable symptoms so often complained of when other purgatives are taken.

As has been previously stated, one of the premises of our work was the avoidance of laxative doses, and great care was taken to avoid any flushing effect. Still, the fact remains that it did stimulate the alimentary tract to some extent, and that the evacuations of those taking the salts were more regular and of a free nature, requiring no straining at the stool. Moreover, the number of evacuations in-

creased to two or three a day. One feature to be noticed was the absence of any binding effect on the days on which the salt was not taken, and that the beneficial stimulation of the intestinal tract appeared to last for several days. Over 80 per cent of those volunteering for the study were suffering from various degrees of constipation, and felt the beneficial effect brought about by the elimination of body waste. It was noticeable that those subjects who did not report any improvement were those who were feeling fit and well and were regular in their habits and hence did not need laxative effects of the acid sodium phosphate.

The benefits accruing from taking the salts manifested themselves by increased appetites, increased weight, absence of bad breath, disappearance of headaches, and a slight drop in blood pressure. Persons who were accustomed to going without breakfast found that they were now compelled to eat a substantial meal. Several reported that they were able to remain up later at night and awoke the next morning feeling less tired than had been their habit at the beginning of the experiment. Unfortunately the type of work in which this group were engaged prevented any study of improvement in their productive ability.

Dujardin-Beaumetz, in discussing the utility of adding phosphate to food and the favorable results which have been noticed, suggests that they probably are due to a regulatory action on the alimentary tube, or to some acid element which it conveys to the stomach, or to some other indirect result.

3. INCREASE IN PRODUCTION DUE TO INGESTION OF ACID SODIUM PHOSPHATE

Through the cooperation of the Federal Post Office Department, in Washington, we were able to obtain the assistance of 30 girls employed in the auditing section for this part of the study. The girls volunteered to take the salt regularly for us on the condition that if they felt any ill effect they could drop out of the test at any time.

These girls were working card-perforating machines, which are operated electrically and controlled by 12 keys arranged in four rows. Most of the girls use the touch system, involving at least three fingers on the right hand, while the left hand is used in feeding the cards into the machine. The girls complain that their arms become tired from the operation. They work in well lighted and ventilated rooms. The hours of employment are from 9 a. m. until 4.30 p. m., with half an hour for lunch from 12 until 12.30, and with 15 minutes' rest periods in the morning and afternoon, making actual operation of the machine six and a half hours. These girls are practically engaged in piecework, as their pay for any six months

is determined by the average daily number of cards correctly punched during the previous six months.

The office keeps a record of the work of each girl from the first day she begins to work until she leaves the employment of the department, and because of this record they presented an ideal group on which to make such a study as we were conducting.

As a control group we used the record of girls employed at the same time who were not taking the phosphate and did not know that they were being used for that purpose.

Records of production and errors in the city post office were obtained for the period from February 15, 1924, to May 31, 1924, the phosphate being given from March 13 to April 24 to 30 girls.[1] A group of 20 girls, for whom records were obtained for the entire

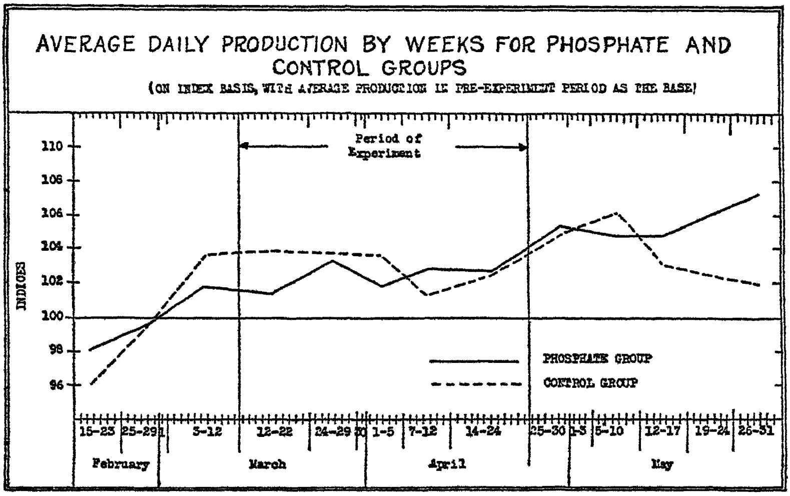

FIG 1

period, served as controls. The control group was selected at random from the other girls performing the same operation.

The records give the production for each day for each girl. Whenever the girl's time at the office was less than seven hours, the exact time was put down, but all those who showed less than six and three-fourths hours at the office were excluded from our records for that day.

First is presented a table and graph giving the average daily production by weeks throughout the period for two groups—those given the phosphate, and those serving as controls (Tables 1 and 2; Figs. 1 and 2.) For the purposes of the graph, the averages have been reduced to indices, using as the base the average daily production in the preexperiment period. Since the phosphate admin-

[1] Records for two (Nos 26 and 126) of the 30 girls were incomplete, hence the study has been limited to 28 girls.

istration was commenced and ended in the middle of the week, the data have been divided at these points, and the incomplete parts combined with the preceding or succeeding week, as the case may be.[2]

TABLE 1 —*Average daily production by weeks for phosphate and control group*

Period	Average daily production		Indices [1]	
	Group receiving phosphate	Control group	Group receiving phosphate	Control group
Feb 15–23 [2]	3,125	2,744	98.1	96.0
Feb 25–Mar. 1	3,170	2,835	99.5	99.2
Mar 3–12	3,241	2,961	101.8	103.6
Mar 13–22	3,228	2,961	101.4	103.6
Mar 24–29	3,291	2,964	103.4	103.7
Mar 31–Apr 5	3,242	2,959	101.8	103.6
Apr. 7–12	3,276	2,890	102.9	101.2
Apr 14–24	3,274	2,928	102.8	102.5
Apr. 25–May 3	3,360	2,997	105.5	104.9
May 5–10	3,340	3,033	104.9	106.2
May 12–17	3,345	2,948	105.0	103.2
May 19–24	3,381	2,928	106.2	102.5
May 26–31	3,419	2,916	107.3	102.1
Average, Feb 19–Mar 12	3,185	2,857	----------	----------

[1] Base is the average daily production for period from Feb 15 to Mar 12
[2] Feb 15 and 16 and days of other incomplete weeks are combined with preceding or succeeding periods.

The graph indicates a general upward trend for the phosphate group throughout the three and one-half months. The rise does not appear to be connected with the phosphate treatment, as it commenced in the preexperiment period and continued through May. Records for June were not obtained, but it would be possible to have them if it were felt worth while to put this additional time on the work. The fact that the phosphate group has a higher average production than the other group is of course of no significance. We are concerned only with the changes in the production curve.

The control group, being smaller, fluctuates more than the other group, but also suggests an upward trend. The control curve crosses the phosphate curve in each period. Certainly no evidence of any effect due to the phosphates is offered by this table and graph.

That the upward trend noted above occurs chiefly among the workers with least efficiency is indicated by Table 2 and Figure 2, which are similar to the first table and graph, but are limited to the 10 most efficient workers in each group (those with the 10 highest averages in the preexperiment period.)[3]

[2] February 15 and 16 were also combined with the succeeding week to avoid too great fluctuation.
[3] The numbers of the girls used for this table and graph were. *Phosphate group* 10, 24, 27, 43, 50, 81, 85, 100, 106, 114. *Control:* 9, 11, 14, 45, 63, 67, 68, 89, 92, 121. See Tables 4 and 5 for individual production in preexperiment period.

TABLE 2 —*Average daily production by weeks for 10 most efficient workers in each group* [1]

Period	Average daily production		Indices [2]	
	Group receiving phosphate	Control group	Group receiving phosphate	Control group
Feb 15-23 [3]	3,615	3,518	97 7	99 6
Feb 25-Mar 1	3,687	3,541	99 6	100 3
Mar 3-12	3,778	3,533	102 1	100 1
Mar 13-22	3,711	3,556	100 3	100 7
Mar 24-29	3,731	3,545	100 8	100 4
Mar 31-Apr 5	3,723	3,532	100 6	101 4
Apr 7-12	3,736	3,607	100 9	102.2
Apr 14-21	3,740	3,562	101 1	100 9
Apr 25-May 3	3,761	3,541	101 6	100 3
May 5-10	3,743	3,545	101.1	100.4
May 12-17	3,708	3,520	100.2	99 7
May 19-24	3,711	3,526	100 3	99 9
May 26-31	3,730	3,531	100 8	100 0
Average, Feb 15-Mar 12	3,701	3,531		

[1] Ten with highest average daily production during preexperiment period
[2] Base is the average daily production for period from Feb 15 to Mar 12
[3] Feb 15 and 16 and days of other incomplete weeks are cobmined with preceding or succeeding periods.

Here little or no upward trend is observable. There is again no indication that the group given phosphates showed any increase in production as a result of this treatment, either when compared with the periods before and after the experiment, or when compared with

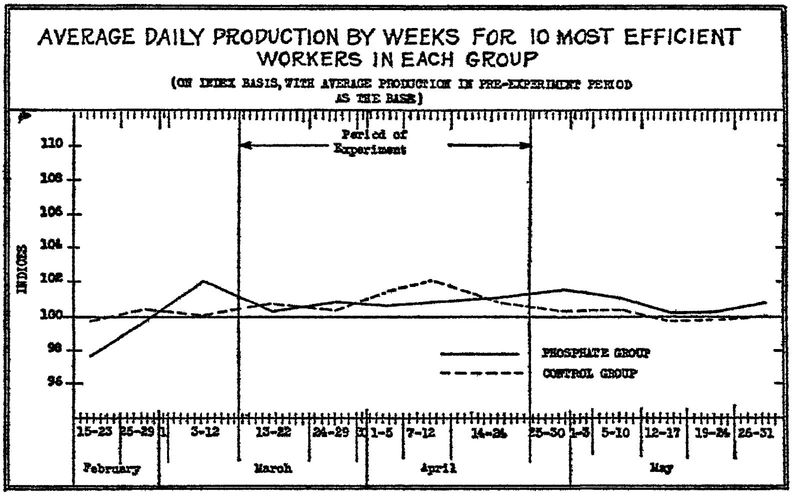

FIG 2

the control group. The phosphate group reached one of its highest points before the experiment was begun, and the other after it was ended.

To be entirely certain of our conclusions, however, it seemed well to study also the individual workers, as it was possible that a few

might have shown increased production without affecting the total group appreciably The next two tables (3 and 4) therefore give for the three periods (before the experiment, during the experiment, and after the experiment) the average daily production of each worker, both those given phosphates and those not given phosphates. For convenience, these averages are reduced to indices, using as the base the production during the preexperiment period. A 10 per cent increase, obviously, in production during the second period over the first period, therefore, would be indicated by the figure 110 in the second period. It is observed that in no instances among those given phosphates does the index figure for the second period reach 110, and that in those cases where it is somewhat high it is likely to be still higher in the third period (thus suggesting that the increase probably is connected with some other factor independent of the effect of the phosphate). The tables for the phosphate group and for the control group are very similar and the differences appear to be due to chance.

TABLE 3.—*Average daily production in three periods for each worker given phosphates, with indices* [1]

No of worker	Average daily production			Indices [1]		
	Feb 15–Mar 12	Mar 13–Apr 24	Apr 25–May 31	Feb 15–Mar 12	Mar 13–Apr 24	Apr 25–May 31
100	3,912	3,989	3,917	100	102	100
85	3,893	3,813	3,823	100	98	98
114	3,865	3,969	4,033	100	103	104
43	3,730	3,822	3,800	100	102	102
50	3,657	3,663	3,628	100	100	99
81	3,638	3,674	3,716	100	101	99
106	3,636	3,623	3,652	100	100	100
10	3,609	3,638	3,743	100	101	104
27	3,507	3,508	3,435	100	100	98
24	3,457	3,522	3,529	100	102	102
62	3,403	3,630	4,002	100	107	118
77	3,375	3,583	3,583	100	106	106
1	3,205	3,392	3,538	100	106	110
96	3,194	3,044	3,210	100	95	100
71	3,100	3,168	3,144	100	102	101
80	3,090	3,331	3,425	100	108	111
32	3,084	3,218	3,208	100	104	104
25	3,033	3,201	3,176	100	106	105
120	2,940	2,871	2,905	100	98	99
115	2,911	2,872	2,863	100	99	98
107	2,876	2,876	3,269	100	100	114
51	2,819	2,905	2,942	100	103	104
59	2,735	2,683	2,850	100	98	104
124	2,717	2,933	3,057	100	108	112
29	2,670	2,778	2,673	100	104	100
16	2,563	2,668	2,893	100	104	113
55	2,563	2,564	3,586	100	100	140
82	1,911	1,995	2,295	100	104	120
Median ratios [2]				100	102 1	103 8

[1] Average daily production for period Feb 15 to Mar 12 is the base.
[2] In calculating median (middle item) the indices were carried to one decimal place.

TABLE 4.—*Average daily production in three periods for each worker in control group, with indices* [1]

No of worker	Average daily production			Indices [1]		
	Feb 15–Mar 12	Mar 13–Apr 24	Apr 25–May 31	Feb 15–Mar 12	Mar 13–Apr 24	Apr 25–May 31
14	3,816	3,975	4,086	100	104	107
9	3,633	3,402	3,492	100	94	96
63	3,622	3,542	3,540	100	98	98
121	3,589	3,529	3,452	100	98	96
67	3,587	3,562	3,716	100	99	104
92	3,560	3,585	3,446	100	101	97
45	3,493	3,503	3,500	100	100	100
11	3,380	3,369	3,388	100	100	100
68	3,357	3,358	3,285	100	100	98
89	3,293	3,472	3,334	100	105	101
17	3,044	3,029	3,037	100	99	100
44	2,900	2,987	3,012	100	103	104
95	2,799	2,781	2,932	100	99	105
47	2,660	2,828	3,019	100	106	114
73	2,377	2,681	3,042	100	113	128
102	2,277	2,282	2,456	100	100	108
86	1,893	2,232	2,413	100	118	127
41	1,060	1,208	1,262	100	114	119
7	367	391	747	100	107	203
Median ratios [2]				100	100.3	103.6

[1] Average daily production for period Feb 15 to Mar 12 is the base
[2] In calculating median (middle item) the indices were carried to one decimal place

TABLE 5.—*Average daily production by weeks for each worker given phosphates (in tens)* [1]

No of worker	Feb 15–23 ([2])	Feb 25–Mar 1	Mar 3–12	Mar. 13–22	Mar. 24–29	Mar 31–Apr 5	Apr 7–12	Apr 14–24	Apr 25–May 3	May 5–10	May 12–17	May 19–24	May 26–31
100	389	388	395	398	398	397	410	395	398	392	383	390	394
85	393	390	386	384	380	381	385	378	379	378	388	383	388
114	370	398	393	386	405	392	397	404	498	412	410	403	397
43	361	373	382	381	374	380	393	383	386	382	383	377	369
50	353	352	384	363	371	369	360	367	372	353	353	356	376
81	345	356	382	366	372	364	352	377	380	374	368	363	370
106	355	369	368	362	365	364	364	359	360	373	361	364	367
10	355	361	372	361	345	373	371	377	377	384	364	376	368
27	343	352	357	355	369	344	345	338	345	343	342	340	347
24	341	344	351	352	352	349	354	353	353	352	352	355	352
62	317	352	344	343	344	341	369	396	426	396	392	389	388
77	349	305	368	356	363	369	356	354	351	358	363	364	356
1	307	317	333	336	335	346	347	337	367	363	348	338	345
96	304	300	341	307		300	303	305	323	326	318	310	328
71	313	309	309	312	317	322	318	317	320	317	314	309	310
80	310	316	305	306	312	339	355	341	348	348	335	337	343
32	291	369	318	319	324	320	322	325	322	320	321	318	323
25	298	297	312	320	319	318	323	320	319	319	311	314	330
120	303	289	290	291	293	286	289	279	294	295	287	283	
115	288	283	297	283	301	284	281	289	269	288	291	296	288
107	283	273	299	300	294	282	295	273	340	327	340	308	311
51	278	276	288	288	287	300	304	283	291	300	292	291	300
59	260	271	284	260	276	267	280	267	281	269	294	292	292
124	264	278	275	286	296	283	295	303	300	313	308	300	309
29	277	275	256	273	285	294	273	273	290	241	271	260	264
16	253	268	252	265	266	260	263	275	285	292	289	288	294
55	251	252	262	255	265	253	255	256	291	387	377	377	375
82	177	198	198	201	186	191	188	219	219	231	239	------	------

[1] That is the figures given in the table are one-tenth of the actual averages.
[2] February 15, 16, and other incomplete weeks are combined with preceding or succeeding periods

In Table 5 are given figures representing the average daily production, by weeks, for each worker and these data are plotted in Figures 3 and 4 (except for a few individuals showing very erratic curves).

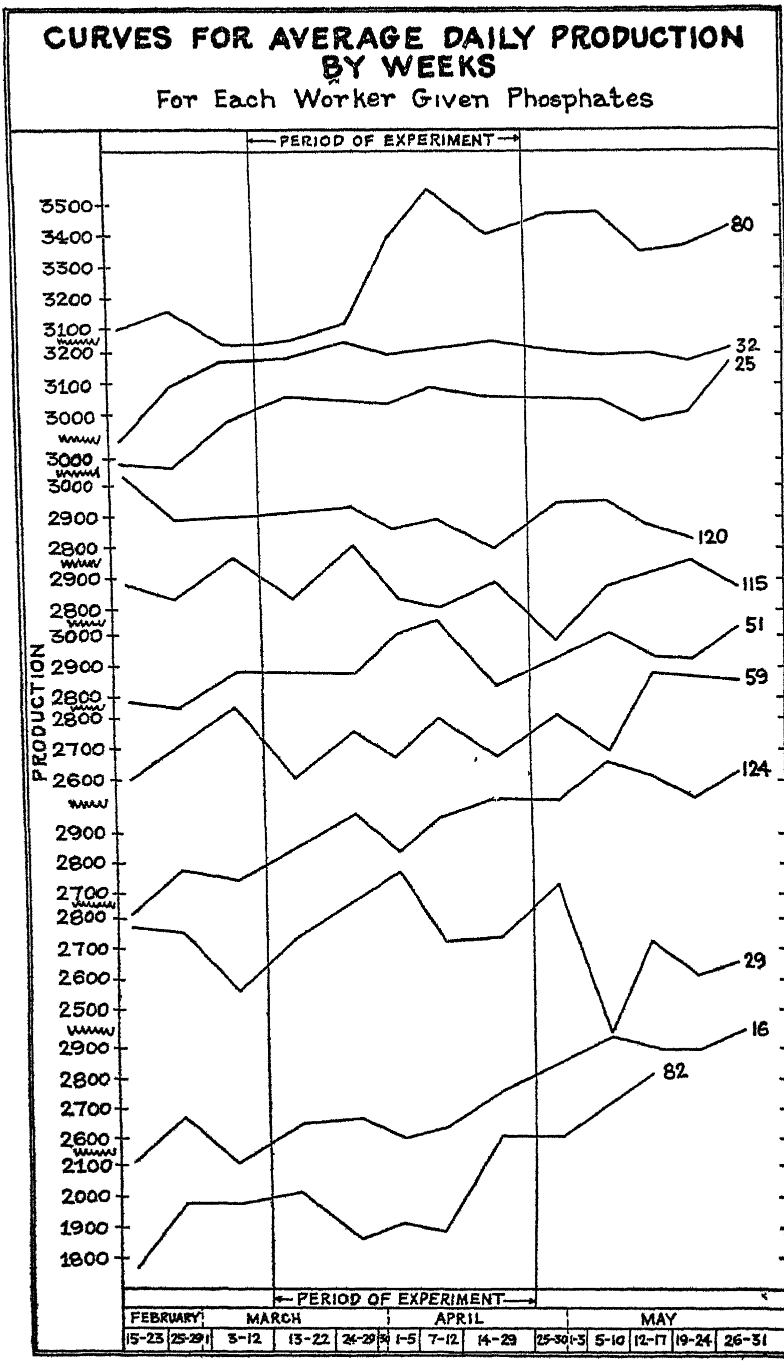
CURVES FOR AVERAGE DAILY PRODUCTION BY WEEKS
For Each Worker Given Phosphates
PERIOD OF EXPERIMENT
PRODUCTION
80
32
25
120
115
51
59
124
29
16
82
FEBRUARY
MARCH
APRIL
MAY
15-23
25-29
3-12
13-22
24-29
1-5
7-12
14-29
25-30
1-3
5-10
12-17
19-24
26-31

FIG. 3

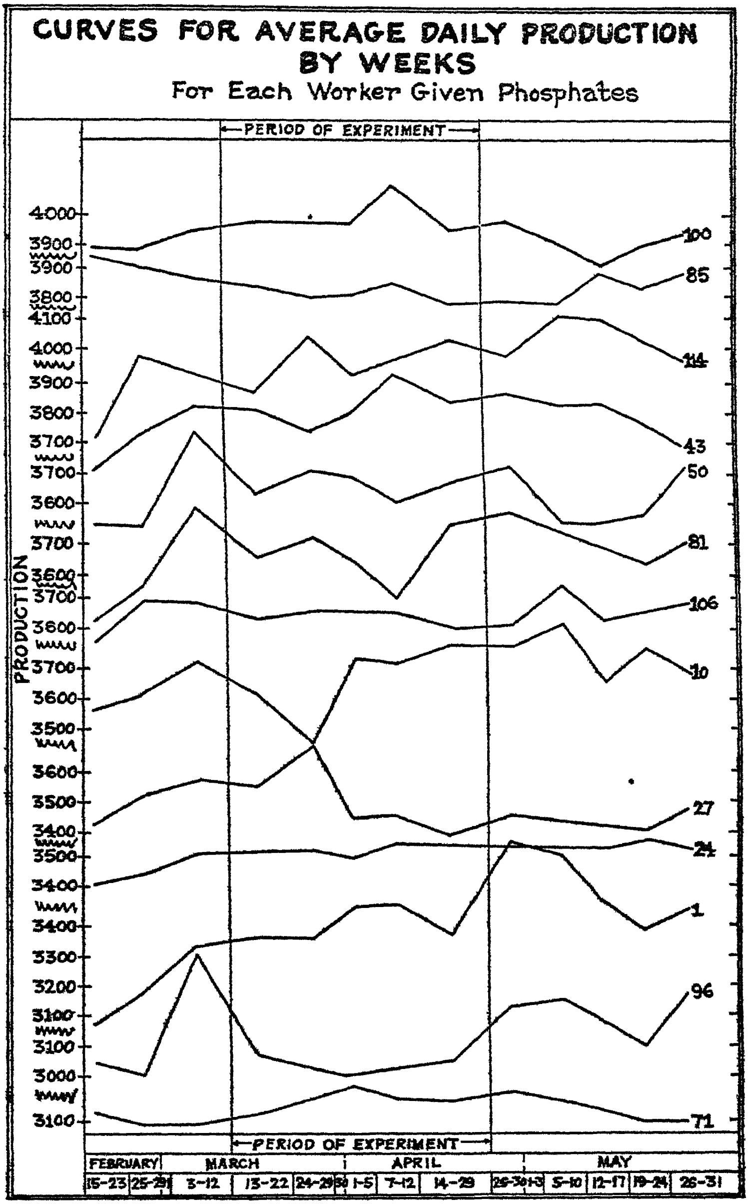
CURVES FOR AVERAGE DAILY PRODUCTION BY WEEKS
For Each Worker Given Phosphates
PERIOD OF EXPERIMENT
PRODUCTION
100
85
114
43
50
81
106
10
27
24
1
96
71
FEBRUARY
MARCH
APRIL
MAY
15-23
25-29
3-12
13-22
24-29
1-5
7-12
14-29
5-10
12-17
19-24
26-31

FIG 4

To save space in the table the averages have been given without the final place. Thus the figures are one-tenth of the actual averages. Parts of weeks have been combined with preceding and succeeding weeks, as in Tables 1 and 2. No pronounced rise during the experiment period is anywhere observable.

The records also gave the number of errors made by the girls. Table 6 summarizes the results. During the experiment period the average number of errors per day was not significantly different from that occuring before the experiment or after it. The control group shows the same chance distribution. It is, of course, of no importance that the phosphate group made slightly more errors than the control group throughout.

TABLE 6.—*Average daily number of errors made in the three periods by the phosphate and control groups*

Period	Group receiving phosphates	Group not receiving phosphates
Feb 15–Mar 12	1 94	1 69
Mar 13–Apr 24	1 99	1.73
Apr. 25–May 30	1 93	1 64

SUMMARY

1. The impossibility of determining a base line from which to judge fatigue in an animal seems fairly well established.
2. The benefits derived from ingesting acid sodium phosphate appear to depend on its stimulating action on the intestinal tract.
3. The ingestion of acid sodium phosphate does not appear to increase muscular efficiency.
4. The feeling of well-being experienced by the group which was studied to determine the general physiological effects of the salt was probably, in part, due to increased elimination of body wastes.

BIBLIOGRAPHY

(1) Emden, Schmitz, and Meincke (1921): Zeitschr. für physiol. Chem., vol. 113, p 10.
Emden, Grafe, and Schmitz (1921): Ibid. p. 67.
(2) MacLeod, J. J R. (1899): Zeitschr. fur physiol. Chem , vol. 28, pp. 535–558.
(3) Meigs, E B. (1912): Jour. Exper. Zool., vol. 13, pp. 497–571
(4) Lehman, E. P (1921): Journ. Bio. Chem., vol. 48, pp. 293–303.
(5) Underhill, F B., Bogert, L. J (1918): Journ. Bio. Chem., vol. 36, pp 521–530.
(6) Meigs, E. B , Batherwick, N. R., and Cary, C. A (1919): Journ Bio. Chem., vol. 40, pp. 469–500.
(7) Kingo Goto (1918): Journ. Bio. Chem., vol. 36, pp. 355–376.
(8) Bauer: Food in Health and Disease By Yeo. I. Burney. Lea Bros & Co, pp. 27.
(9) Sherman: Chemistry of Food and Nutrition, MacMillan Co.

PUBLIC HEALTH ENGINEERING ABSTRACTS

A Study of Milk Problems in Canada. Committee of the Canadian Public Health Association, Dr. M M. Seymour, chairman. *Public Health Journal*, vol. 17, No. 5, May, 1926, pp. 241–244. (Abstract by R. E. Tarbett.)

The authors discuss the findings of the committee appointed for the purpose of making a study of "Milk Problems" and reporting its findings at the annual meeting of the Public Health Association of Canada.

The report is based on a questionnaire addressed to the various health departments (city and provincial) of Canada. Statistics have been compiled from the data furnished in the replies, and have been added as an appendix to the report. The report is in the nature of a preliminary study and outline of the difficulties confronting the public health officer in safeguarding the milk offered for sale in his community.

The authors urge the necessity of encouraging dairy farming, by every possible means, to increase the volume of supply and the number of producers. This increase in supply and number of producers will bear upon the health aspect of the question, the authors point out, as keener competition will enable the public health officer to raise the standard of production.

An average per capita consumption of 0 71 pint per day for the 21 cities reporting is compared with the per capita consumption of 0.54 pint per day in New York in 1923.

Data regarding epidemics of milk-borne disease in Canada were collected, and the results have been set down in the appendix to the report. It was noted that only two diseases, typhoid fever and scarlet fever, are named as occurring in the epidemics traced to milk infection, and that no records are available regarding diphtheria and septic sore throat conveyed by milk supplies. The epidemics reported on are regarded as representing only a small proportion of the outbreaks that have occurred.

The importance of safeguarding the milk supply is pointed out, as, the authors state, milk has been the means of causing more disease than any other single food.

Local problems in connection with milk control, as reported on by the various provincial and city departments of health, are set forth in the article, among which were included the following: Difficulty of insuring cleanliness in the handling of milk and in the care of cows and stables, ignorance of farmers and difficulty of reaching them in the rural districts, difficulty of enforcing pasteurization of milk.

Hog Feeding at Flint, Mich. Nahum W. Long. *Public Works*, vol. 57, No. 3, April, 1926, pp. 81–82. (Abstract by J. K. Hoskins.)

Flint, with a population of about 135,000, acquired a run-down farm about 12 miles distant that had railroad shipping facilities available and used this farm for disposal of town garbage by feeding hogs. From 1,000 to 1,700 head are maintained, depending on the flow of garbage.

Methods of feeding, soil renovating, and cleaning are described. Selection of the proper stock for feeding is emphasized and the procedure followed in keeping the animals in proper condition is outlined. The profit last year from feeding amounted to over $40,000

The Influence of Soft and of Hard Waters on the Decomposition of Sewage. J. E Purvis, chairman, Cambridge Sewage Disposal Committee. *Surveyor*, vol. 69, No. 1781, March 5, 1926, pp. 277–278. (Abstract by Rudolph E. Thompson)

It has been previously shown by the author and his colleagues that the decomposition of sewage occurs very slowly when the sewage is mixed with sea water or other saline solutions. In the present investigation experiments were carried out to determine whether the hardness of the water employed for carrying the sewage had an influence on the rate of decomposition. Mixtures of domestic sewage and soft water (distilled) and of domestic sewage and hard water (18 5° and 25°) were aerated under parallel conditions at varying rates and for different periods of time The results of these experiments showed that oxidation occurred much more rapidly in the soft-water mixtures than in the hard-water mixtures, the free and albuminoid ammonia and oxygen consumed values in every instance being lower in the former than in the latter after aeration. The nitrites were irregular, but the nitrates were invariably higher with the soft water. It was also observed that the hard-water mixtures were more opalescent in appearance, probably due to the precipitation of colloidal substances. This would increase the amount of sludge deposited during tank treatment, thus reducing the load on the subsequent treatment processes employed The importance of considering these factors in comparing the results of different plants and methods of purification is emphasized.

Recent Experiments in Dewatering Sewage Sludge. Herbert D Bell, manager and chemist, Barnsley Sewage Works. *Surveyor*, vol. 69, No. 1775, January 22, 1926, pp. 79–81. (Abstract by Rudolph E. Thompson.)

Experiments are described in which sewage was dried from moisture content of 98 per cent to about 80 per cent by draining for about 20 hours on a sludge bed consisting of land drains, overlaid with granite and topped with sand. The sludges experimented with were of three types—liquid sludge produced by precipitation with lime (4 g. p. g.), plain sedimentation sludge, and limed sedimentation sludge. The presence of lime, added either prior or subsequent to

settling, facilitated dewatering, the plain sedimentation sludge requiring 68 hours to drain to 80 per cent moisture, whereas that containing lime required only 20 hours The effluent was perfectly bright and clear Beds prepared with various sands and with ashes as top dressing (3 inches) were compared and it was found that sand with smooth, rounded grains gave the best results, and that removal of sludge cake could be carried out more readily than in the case of ashes and sand with rough angular grains The drying process appears to continue when the cake is removed and tipped on to small heaps, the sludge heating up and emitting large volumes of water vapor when disturbed.

Sewage Sludge. Anon. *American Journal of Public Health*, vol. 16, No 1, January, 1926, pp 39–42. (Abstract by A L Dopmeyer)

This article is the progress report of the Committee on Sludge of the A P H A., presented at the meeting in October, 1925.

Increased interest in the use of sewage sludge on the part of the agriculturist and fruit grower, and the demand upon the part of the golf clubs, flower growers, and fertilizer manufacturers for the organic nitrogen in the sludge when reduced to a dry basis are given as the outstanding features of the progress made during the year in sludge disposal.

Particular instances are cited of attempts at economically disposing of sewage sludge from some of the larger sewage plants, particularly those of the activated sludge type. It is suggested that the activated sludge process might be used more if some method were discovered for economically disposing of the sludge from both large and small plants and the committee recommends that caution be used in approving plans for new projects

The Relation of Storage Water Supply Lakes to Malaria. J. A. Le Prince, United States Public Health Service. *Journal North Carolina Section American Water Works Association*, vol. 3, No. 1, pp. 42–50. (Abstract by L. D. Fricks.)

The dangers of increasing mosquito production, and, perhaps, malaria prevalence, by impounding waters are clearly pointed out in this paper. The problem of impounding city water supplies without increasing these dangers has become serious for southern cities and will continue so until the engineer responsible for planning and constructing these reservoirs familiarizes himself with and applies proper measures for the control of mosquito production. An outline is given of regulations for impounded waters as suggested by the United States Public Health Service and adopted by several Southern States.

The cardinal points of these regulations are as follows: Care of laborers employed in construction work; clearing of reservoir basin;

prevention of log jams; drift and flotage; fluctuation of water level; clearing of shore line; regular inspections for mosquito production; stocking with *Gambusia*, control of separate pools and seepage places around reservoirs; and licensing by State board of health.

ILLINOIS ADOPTS REGULATIONS REGARDING ZINC STEARATE CONTAINERS

The Illinois Department of Public Health recently adopted regulations relating to containers for zinc or other stearate toilet or dusting powders The said regulations went into effect June 10, 1926, and read as follows:

Whereas it has been reported to the Department of Public Health of the State of Illinois that accidents and deaths have been caused from the inhaling of stearate of zinc dusting powders by children, and

Whereas, by investigation and survey, the said department of public health has secured data showing numerous accidents and deaths which were caused from the inhaling of such powders by children; and

Whereas, by investigation, research, and survey, the said department of public health has determined that stearate of zinc dusting powders are poisonous when inhaled; and

Whereas it has been determined by the said department of public health that the lack of proper containers for such stearate of zinc dusting powders is the underlying cause of these accidents and deaths; and

Whereas it is determined by the said department of public health that such accidents and deaths from the inhaling of stearate of zinc dusting powders will be prevented if such stearate of zinc dusting powders are dispensed in containers so constructed as to prevent seepage or spilling from the joints and seams and equipped with an automatic closing top;

Therefore the Department of Public Health of the State of Illinois, pursuant to statutory power vested in this department, hereby adopts and promulgates the following rules and regulations

RULE I. No person, persons, company, or corporation shall, from and after the 10th day of June, A D 1926, sell, offer for sale, or dispense to the general public, zinc or other stearate toilet or dusting powders, or toilet or dusting powders containing stearate of zinc or other stearate having similar physical properties as one of the ingredients in excess of 10 per cent by weight, unless such dusting powders shall be sold, offered for sale, or dispensed in containers which comply with the specifications set forth by these rules.

RULE II. Containers shall be substantially constructed. All joints and seams shall be closed by crimping, soldering, or equivalent method so as to effectively prevent separation or leakage at seams or joints.

RULE III Containers shall be equipped with an extreme top with a substantial self-closing device which will remain closed at all times when not in use. The self-closing device shall be of sufficient strength to retain a closing tension of not less than 2 pounds, or 907 2 grams, throughout the ordinary life of the container in order to prevent its operation by an infant.

RULE IV. The extreme top shall have a diameter of not less than 2 inches, or 50 8 millimeters, in order to prevent its insertion into the mouth of an infant. The opening or openings in the top shall not exceed in total area 40 square millimeters, and the diameter of no opening shall exceed 3 millimeters.

RULE V Containers shall bear in plain sight and separated from other reading matter the following label

CAUTION—THIS POWDER MAY BE INJURIOUS IF INHALED

Penalty—Any person, persons, company, or corporation who violates or refuses to comply with and obey these rules and regulations shall be subject to prosecution for the violation or refusal, and shall be subject to fine of not to exceed $200 for each offense or imprisonment in the county jail not to exceed six months or both.

It shall be the duty of all local boards of health, health authorities and officers, police officers, sheriffs, constables, and all other officers and employees of the State or any county, village, city, or township thereof, to enforce the rules and regulations hereby adopted and set forth

COURT DECISIONS RELATING TO PUBLIC HEALTH

Authority of legislature to abolish or reduce term of office of parish board of health.—(Louisiana Supreme Court, Gouaux *v.* Smith et al., 107 So 466, decided January 4, 1926) In June, 1920, a board of health of three members was appointed for the parish of Lafourche and the plaintiff in this case was made chairman of the board and ex officio parish health officer. The term of office of the members was four years.

A 1920 statute called a constitutional convention and a proviso in the act forbade the convention to enact or adopt any article or provision reducing or shortening the terms of office of the public officials throughout the State, whether elected or appointed, and whether State, district, parish, or municipal officers The new constitution adopted in 1921 contained the following in article 22:

Sixth All officers, executive, legislative and judicial, State, parish, or municipal, who may be in office at the adoption of this constitution, or who may be elected or appointed before the election or appointment of their successors as herein provided, shall hold their respective offices until their terms shall have expired, and until their successors are duly qualified, as provided in this constitution, unless sooner removed, as may be provided by law, and shall receive the compensation now fixed by the constitution and laws in force at the adoption of this constitution, except as herein otherwise provided

The constitution of 1898 contained the following provision:

The general assembly shall create for the State and for each parish and municipality therein, boards of health, and shall define their duties, and prescribe the powers thereof.

A similar provision was incorporated in the 1913 and 1921 constitutions.

Act 79 of the laws of 1921, which was an act to carry into effect the foregoing 1921 constitutional provision regarding boards of health, in terms did away with the boards of health theretofore created and

created new boards as their successors. Pursuant to act 79 a new board of health for the parish of Lafourche was appointed in March, 1922, composed of five members for a term of four years. The plaintiff was one of the members appointed but another member was made parish health officer. The plaintiff did not qualify under the new appointment but brought suit contesting the claims of the other new appointees and particularly the claim of the newly appointed health officer. Plaintiff's contention was that act 79 of 1921, so far as it attempted to shorten the term of office of the members of the parish board of health appointed in June, 1920, and particularly so far as it attempted to shorten plaintiff's term of office as parish health officer, was violative of the prohibition imposed by the 1920 act calling the constitutional convention and of the proviso quoted from article 22 of the 1921 constitution.

Judgment of the lower court was for the plaintiff, but the supreme court decided that the legislature was not deprived of its authority to abolish the offices of members of parish boards of health or to reduce the term of such offices. The court was of the opinion that the restriction in the act calling the constitutional convention was imposed upon the convention only and not upon the legislature, and that, as the portion of the constitution relating to parish boards of health did not fix the term of office, the legislature had authority to fix it. The court also held that the language quoted from article 22 of the constitution did not interfere with the authority which the legislature had to remove any public officer by abolishing his office, provided it was an office which the legislature had authority to create.

Orders of State board of health forbidding use of schoolhouses until insanitary and unsafe conditions had been remedied held appealable.—(Indiana Appellate Court, State Board of Health *v.* Ort, Township Trustee, 151 N. E. 31, decided March 12, 1926.) The State board of health, after hearing, entered orders condemning several schoolhouses because of certain insanitary, unsafe, and dangerous conditions, and prohibited their use for school purposes after a certain date unless and until the said conditions had been remedied. The township trustee appealed from these orders to the county circuit court. The lower court sustained the appeal and on further appeal by the State board of health the appellate court affirmed the judgment of the lower court. The question was presented to the appellate court as to the right of the township trustee to appeal from such orders of the State board of health. Chapter 90 of the laws of 1919 provided that "an appeal shall hereafter lie from all decisions of the State Board of Health of Indiana in any matter involving the building, changing, or condemnation of any school building in the State of Indiana." The

appellate court held that "The orders of the State board of health as to the schoolhouses referred to are orders which involve the changing of the building, within the meaning of the act [ch. 90] of 1919, supra, and that the appeal to the circuit court was authorized."

Power of State to prohibit the sale, possession, etc., of peyote (pellote).—(Montana Supreme Court; State *v.* Big Sheep, 243 P. 1067, decided January 26, 1926.) In this case, involving the possession of peyote by the defendant, an Indian, in violation of chapter 22 of the laws of 1923, the supreme court stated that "It was clearly within the power of the legislature to determine whether the practice of using peyote is inconsistent with the good order, peace, and safety of the State."

Conviction under State pure food law upheld.—(Wisconsin Supreme Court; Day-Bergwall Co. *v.* State, 207 N. W. 959; decided March 9, 1926.) A company manufactured and sold a compound for use in flavoring foods and confections. This compound was for use in place of vanilla extract and it was conceded that the compound was not injurious to the public health. However, caramel was used in the compound and this gave it a coloring similar to vanilla extract. It was charged that this was in violation of that portion of the State pure food law which declared an article of food to be adulterated "if it is colored or flavored in imitation of the genuine color or flavor of another substance." The conviction of the company in the lower court for violation of the above quoted portion of the law was affirmed by the supreme court, which held the law to be valid.

DEATHS DURING WEEK ENDED JULY 3, 1926

Summary of information received by telegraph from industrial insurance companies for week ended July 3, 1926, and corresponding week of 1925. (From the Weekly Health Index, July 8, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended July 3, 1926	Corresponding week, 1925
Policies in force	64, 897, 122	60, 437, 798
Number of death claims	10, 930	9, 435
Death claims per 1,000 policies in force, annual rate	8. 8	8. 1

Deaths from all causes in certain large cities of the United States during the week ended July 3, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, July 8, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended July 3, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended July 3, 1926[2]
	Total deaths	Death rate[1]		Week ended July 3, 1926	Corresponding week, 1925	
Total (64 cities)	6,398	11 6	10 3	678	662	[3] 55
Akron	33			6	0	64
Albany[4]	35	15 3	7 5	5	3	105
Atlanta	75			13	19	
White	29			3		
Colored	46	(5)		10		
Baltimore[4]	199	12 8	10 9	20	15	58
White	142			12		43
Colored	57	(5)		8		130
Birmingham	54	13.3	15.0	9	20	
White	23			3		
Colored	31	(5)		6		
Boston	186	12.3	11 0	26	17	73
Bridgeport	21			4	3	68
Buffalo	135	12.9	10.2	12	15	50
Cambridge	24	10.3	7.8	6	1	100
Camden	30	11.9	8 9	2	1	34
Canton	22	10.4	11 8	4	4	89
Chicago[4]	621	10.6	10 4	68	75	60
Cincinnati	120	15.2	12.5	12	3	75
Cleveland	165	9.0	8.7	20	25	52
Columbus	72	13.2	13.8	8	8	73
Dallas	44	11 5	15 4	4	4	
White	37			4		
Colored	7	(5)		0		
Dayton	40	11.8	9 9	3	1	47
Denver	71	13 0	12 1	7	8	
Des Moines	28	10 0	11.4	2	2	33
Detroit	288	11 6	8 0	43	32	69
Duluth	10	4.6	5 7	0	4	0
El Paso	28	13 4	14 4	9	6	
Erie	18			0	3	0
Fall River[4]	33	13 1	11 7	5	5	73
Flint	21	8 0	5 2	3	2	50
Fort Worth	31	10 2	13 7	7	6	
White	28			6		
Colored	3	(5)		1		
Grand Rapids	35	11 7	12 6	3	3	43
Houston	37			5	7	
White	24			3		
Colored	13	(5)		2		
Indianapolis	79	11 2	10 6	6	5	44
White	67			6		51
Colored	12			0		0
Jersey City	61	10 0	6 8	4	5	28
Kansas City, Kans	35	15 6	8 5	5	4	87
White	24			4		84
Colored	11	(5)		1		131
Kansas City, Mo	76	10 6	13 8	7	11	
Los Angeles	232			16	21	44
Louisville	98	16 4	12 4	12	13	103
White	69			9		89
Colored	29	(5)		3		188
Lowell	31			3	4	56
Memphis	65	19 1	20 3	4	10	
White	34			1		
Colored	31	(5)		3		
Milwaukee	91	9 2	10 8	7	14	32
Minneapolis	91	10 9	9.7	5	12	28
Nashville[4]	49	18 6	17 6	5	9	
White	25			3		
Colored	24	(5)		2		

[1] Annual rate per 1,000 population
[2] Deaths under 1 year per 1,000 births Cities left blank are not in the registration area for births
[3] Data for 62 cities
[4] Deaths for week ended Friday July 2, 1926
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Forth Worth 14, Houston 25, Kansas City, Kans , 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C , 25

Deaths from all causes in certain large cities of the United States during the week ended July 3, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended July 3, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended July 3, 1926
	Total deaths	Death rate		Week ended July 3, 1926	Corresponding week, 1925	
New Bedford	29			10	3	174
New Haven	42	12.0	9.6	1	4	14
New Orleans	136	16.9	20.8	12	27	
White	74			2		
Colored	62	(5)		10		
New York	1,212	10.7	8.8	125	103	51
Bronx Borough	155	9.0	6.9	12	13	40
Brooklyn Borough	415	9.7	7.6	50	39	51
Manhattan Borough	493	13.7	11.2	49	42	54
Queens Borough	115	7.8	7.9	11	5	50
Richmond Borough	34	12.4	10.6	3	4	53
Newark, N J	95	10.8	9.4	8	19	38
Norfolk	26	7.8	7.1	1	4	19
White	13			1		30
Colored	13	(5)		0		0
Oakland	48	9.6	8.2	3	1	35
Oklahoma City	25			2	8	
Omaha	57	13.8	11.8	4	6	42
Paterson	25	9.1	6.6	2	1	35
Philadelphia	443	11.5	10.4	43	40	57
Pittsburgh	164	13.4	9.7	23	15	76
Portland, Oreg	74			3	4	31
Providence	65	12.3	11.5	8	5	66
Richmond	51	14.1	9.0	8	5	101
White	28			2		39
Colored	23	(5)		6		210
Rochester	59	9.6	11.0	2	6	16
St Louis	234	14.7	11.4	23	15	
St Paul	51	10.7	10.8	6	4	53
Salt Lake City [4]	27	10.6	12.3	2	6	28
San Antonio	54	13.7	13.7	15	9	
San Diego	26	12.3	16.2	1	2	21
San Francisco	157	14.4	10.1	5	8	30
Schenectady	16	9.0	9.6	1	2	29
Seattle	54			2	7	19
Somerville	14	7.3	3.2	1	0	26
Spokane	32	15.3	10.1	3	3	70
Springfield, Mass	41	14.7	10.6	5	2	72
Tacoma	19	9.3	9.0	3	1	70
Toledo	64	11.4	9.3	8	7	78
Trenton	38	14.8	9.1	3	3	50
Utica	24	12.1	13.3	0	1	0
Washington, D C	132	13.0	11.5	15	10	85
White	83			5		41
Colored	49	(5)		10		182
Waterbury	20			1	2	21
Wilmington, Del	24	10.1	5.6	1	0	23
Worcester	37	10.0	11.5	5	6	58
Yonkers	16	7.2	5.0	1	0	22
Youngstown	32	10.1	12.1	7	4	89

For footnotes 4 and 5, see page 1484.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended July 10, 1926

ALABAMA	Cases
Cerebrospinal meningitis	1
Chicken pox	3
Dengue	2
Diphtheria	3
Influenza	5
Malaria	83
Measles	71
Mumps	10
Ophthalmia neonatorum	1
Pellagra	26
Pneumonia	20
Scarlet fever	8
Smallpox	11
Tuberculosis	41
Typhoid fever	68
Whooping cough	57

ARIZONA	Cases
Chicken pox	1
Diphtheria	1
Measles	11
Mumps	4
Scarlet fever	10
Trachoma	1
Tuberculosis	7
Typhoid fever	4
Whooping cough	12

ARKANSAS	Cases
Cerebrospinal meningitis	1
Chicken pox	5
Diphtheria	4
Hookworm disease	3
Influenza	4
Malaria	61
Measles	14
Pellagra	16
Scarlet fever	2
Smallpox	1
Tuberculosis	7
Typhoid fever	33
Whooping cough	36

CALIFORNIA	Cases
Cerebrospinal meningitis	
Pasadena	1
San Francisco	1
Sacramento	1
Stockton	3
Chicken pox	97
Diphtheria	91
Influenza	3
Lethargic encephalitis	
Fresno	1
Gilroy	1
Measles	256
Mumps	79
Poliomyelitis	
Los Angeles	3
Long Beach	1
Scarlet fever	67
Smallpox	13
Tuberculosis	142
Typhoid fever	11
Whooping cough	61

COLORADO	Cases
Chicken pox	18
Diphtheria	10
Influenza	1
Measles	22
Pneumonia	2
Scarlet fever	8
Tuberculosis	30
Typhoid fever	2
Whooping cough	51

CONNECTICUT	Cases
Chicken pox	47
Conjunctivitis (infectious)	2
Diphtheria	13
Dysentery (bacillary)	1
German measles	13
Influenza	2
Lethargic encephalitis	1
Malaria	2

CONNECTICUT—continued

	Cases
Measles	148
Mumps	2
Pneumonia (all forms)	38
Scarlet fever	39
Tetanus	2
Tuberculosis (all forms)	18
Typhoid fever	7
Whooping cough	23

DELAWARE

Chicken pox	1
Diphtheria	1
Measles	6
Scarlet fever	2
Tuberculosis	1
Whooping cough	7

FLORIDA

Chicken pox	3
Dengue	1
Diphtheria	21
Influenza	189
Lethargic encephalitis	1
Malaria	8
Measles	25
Mumps	19
Pneumonia	184
Scarlet fever	4
Smallpox	12
Tetanus	5
Tuberculosis	127
Typhoid fever	23
Whooping cough	21

GEORGIA

Chicken pox	12
Conjunctivitis	2
Diphtheria	7
Dysentery	61
Influenza	5
Malaria	77
Measles	35
Mumps	11
Pellagra	19
Pneumonia	12
Scarlet fever	2
Septic sore throat	9
Smallpox	8
Tuberculosis	11
Typhoid fever	93
Whooping cough	22

IDAHO

Chicken pox	5
Diphtheria	6
Measles	10
Mumps	3
Scarlet fever	1
Smallpox	1
Tuberculosis	1
Typhoid fever	5
Whooping cough	1

ILLINOIS

	Cases
Cerebrospinal meningitis	
Cook County	1
Morgan County	1
Chicken pox	150
Diphtheria	63
Influenza	75
Measles	598
Mumps	26
Pneumonia	164
Scarlet fever	149
Smallpox	35
Tuberculosis	229
Typhoid fever	18
Whooping cough	167

INDIANA

Cerebrospinal meningitis	1
Chicken pox	42
Diphtheria	27
Influenza	5
Measles	159
Scarlet fever	42
Smallpox	44
Tuberculosis	46
Typhoid fever	6
Whooping cough	100

IOWA

Cerebrospinal meningitis	2
Chicken pox	7
Diphtheria	5
Measles	42
Scarlet fever	13
Smallpox	12
Tuberculosis	10
Typhoid fever	1
Whooping cough	13

KANSAS

Chicken pox	14
Diphtheria	9
German measles	6
Influenza	4
Lethargic encephalitis	1
Measles	53
Mumps	18
Ophthalmia neonatorum	1
Pneumonia	11
Scarlet fever	28
Smallpox	4
Tuberculosis	49
Typhoid fever	11
Whooping cough	91

LOUISIANA

Diphtheria	6
Influenza	41
Malaria	24
Pneumonia	44
Poliomyelitis	1
Scarlet fever	3
Smallpox	1
Tuberculosis	38
Typhoid fever	47

MAINE	Cases
Cerebrospinal meningitis	1
Chicken pox	5
Diphtheria	2
German measles	6
Influenza	2
Measles	44
Mumps	4
Pneumonia	4
Scarlet fever	10
Tuberculosis	6
Typhoid fever	2
Whooping cough	11
MARYLAND [1]	
Chicken pox	23
Diphtheria	16
Dysentery	3
German measles	1
Influenza	2
Measles	119
Mumps	18
Paratyphoid fever	1
Pneumonia (all forms)	28
Scarlet fever	28
Septic sore throat	1
Tuberculosis	55
Typhoid fever	12
Whooping cough	91
MASSACHUSETTS	
Cerebrospinal meningitis	2
Chicken pox	113
Conjunctivitis (suppurative)	8
Diphtheria	45
German measles	86
Influenza	3
Lethargic encephalitis	2
Measles	274
Mumps	53
Ophthalmia neonatorum	40
Pneumonia (lobar)	40
Poliomyelitis	2
Scarlet fever	187
Septic sore throat	1
Tetanus	2
Trachoma	1
Tuberculosis (all forms)	127
Typhoid fever	8
Whooping cough	139
MICHIGAN	
Diphtheria	91
Measles	330
Pneumonia	49
Scarlet fever	179
Smallpox	8
Tuberculosis	59
Typhoid fever	10
Whooping cough	138
MINNESOTA	
Cerebrospinal meningitis	1
Chicken pox	24
Diphtheria	34
Influenza	1

[1] Week ended Friday.

MINNESOTA—continued	Cases
Lethargic encephalitis	2
Measles	193
Pneumonia	2
Poliomyelitis	3
Scarlet fever	117
Smallpox	2
Tuberculosis	61
Typhoid fever	4
Whooping cough	34
MISSISSIPPI	
Diphtheria	3
Poliomyelitis	1
Scarlet fever	1
Smallpox	5
Typhoid fever	57
MISSOURI	
Cerebrospinal meningitis	3
Chicken pox	10
Diphtheria	30
Influenza	2
Measles	107
Ophthalmia neonatorum	1
Pneumonia	1
Rabies in animals	6
Scarlet fever	38
Smallpox	3
Trachoma	2
Tuberculosis	48
Typhoid fever	27
Whooping cough	116
MONTANA	
Chicken pox	4
German measles	2
Measles	104
Rocky Mountain spotted fever	
Baker	1
Ekalaka	1
Scarlet fever	5
Smallpox	9
Tuberculosis	3
NEBRASKA	
Chicken pox	7
Diphtheria	1
Measles	14
Scarlet fever	18
Smallpox	24
Whooping cough	18
NEW JERSEY	
Cerebrospinal meningitis	2
Chicken pox	70
Diphtheria	67
Influenza	2
Measles	249
Pneumonia	30
Scarlet fever	68
Typhoid fever	8
Whooping cough	80
NEW MEXICO	
Chicken pox	1
Diphtheria	4
Dysentery (amebic)	1

NEW MEXICO—continued	Cases
German measles	1
Measles	2
Mumps	2
Pneumonia	1
Scarlet fever	3
Tuberculosis	27
Typhoid fever	5
Whooping cough	20

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	1
Chicken pox	111
Diphtheria	55
German measles	112
Malaria	3
Measles	1,091
Mumps	96
Ophthalmia neonatorum	1
Pneumonia	112
Poliomyelitis	4
Scarlet fever	89
Septic sore throat	1
Smallpox	18
Tetanus	3
Typhoid fever	9
Typhus fever	1
Whooping cough	281

NORTH CAROLINA

Cerebrospinal meningitis	1
Chicken pox	12
Diphtheria	9
German measles	14
Measles	106
Poliomyelitis	9
Scarlet fever	11
Smallpox	12
Typhoid fever	42
Whooping cough	217

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Cerebrospinal meningitis—Muskogee	1
Chicken pox	1
Diphtheria	7
Influenza	12
Malaria	57
Measles	36
Mumps	1
Pellagra	25
Pneumonia	5
Poliomyelitis—Carter	1
Scarlet fever	17
Smallpox	4
Typhoid fever	59
Whooping cough	58

OREGON

Cerebrospinal meningitis	1
Chicken pox	8
Diphtheria	19
Influenza	5
Malaria	1
Measles	49

OREGON—continued	Cases
Mumps	12
Pneumonia	3
Rocky Mountain spotted fever	5
Scarlet fever	15
Septic sore throat	1
Smallpox	
Portland	13
Scattering	14
Tuberculosis	9
Typhoid fever	8
Whooping cough	28

PENNSYLVANIA

Chicken pox	159
Diphtheria	133
German measles	23
Lethargic encephalitis—Wilkinsburg	1
Measles	1,154
Mumps	28
Ophthalmia neonatorum	1
Pneumonia	34
Poliomyelitis—Monroe Township	1
Scarlet fever	251
Tetanus	1
Trachoma	2
Tuberculosis	127
Typhoid fever	52
Whooping cough	314

RHODE ISLAND

Chicken pox	2
German measles	2
Measles	33
Mumps	1
Ophthalmia neonatorum	2
Scarlet fever	3
Tuberculosis	7
Whooping cough	43

SOUTH DAKOTA

Actinomycosis	1
Chicken pox	1
Measles	67
Mumps	3
Pneumonia	2
Scarlet fever	315
Smallpox	1
Tuberculosis	1
Typhoid fever	3
Whooping cough	17

TENNESSEE

Chicken pox	4
Diphtheria	2
Dysentery	3
Influenza	1
Malaria	63
Measles	51
Ophthalmia neonatorum	1
Pellagra	26
Pneumonia	12
Poliomyelitis—Memphis	1
Scarlet fever	6
Smallpox	2
Trachoma	1
Tuberculosis	27
Typhoid fever	75
Whooping cough	104

TEXAS	Cases
Chicken pox	24
Diphtheria	18
Dysentery	6
Influenza	17
Measles	9
Mumps	19
Ophthalmia neonatorum	1
Paratyphoid fever	3
Pellagra	8
Pneumonia	6
Poliomyelitis	6
Scarlet fever	11
Smallpox	12
Tuberculosis	44
Typhoid fever	25
Whooping cough	85
UTAH	
Cerebrospinal meningitis—Murray	1
Chicken pox	4
Diphtheria	7
Measles	8
Mumps	11
Scarlet fever	3
Tuberculosis	1
Typhoid fever	1
Whooping cough	103
VERMONT	
Chicken pox	5
Diphtheria	2
Measles	60
Mumps	5
Scarlet fever	1
Whooping cough	22
WASHINGTON	
Cerebrospinal meningitis	
Seattle	1
Spokane	1
Stevens County	1
Tacoma	1
Chicken pox	36
Diphtheria	26
German measles	12
Measles	47
Mumps	27
Poliomyelitis—Lewis County	1
Rocky Mountain spotted fever—Adams County	1
Scarlet fever	37

WASHINGTON—continued	Cases
Smallpox	24
Tuberculosis	21
Typhoid fever	5
Whooping cough	41
WEST VIRGINIA	
Chicken pox	10
Diphtheria	7
Influenza	5
Measles	140
Scarlet fever	8
Smallpox	3
Tuberculosis	16
Typhoid fever	11
Whooping cough	37
WISCONSIN	
Milwaukee	
Chicken pox	42
Diphtheria	8
German measles	1
Influenza	1
Measles	124
Mumps	12
Pneumonia	8
Scarlet fever	10
Tuberculosis	19
Typhoid fever	2
Whooping cough	49
Scattering	
Chicken pox	72
Diphtheria	12
German measles	16
Influenza	11
Lethargic encephalitis	1
Measles	810
Mumps	11
Pneumonia	11
Scarlet fever	43
Smallpox	6
Tuberculosis	30
Typhoid fever	5
Whooping cough	90
WYOMING	
Cerebrospinal meningitis	1
Chicken pox	3
Measles	5
Rocky Mountain spotted fever	1
Scarlet fever	11
Whooping cough	9

Reports for Week Ended July 3, 1926

DISTRICT OF COLUMBIA	Cases
Chicken pox	13
Diphtheria	23
Influenza	1
Measles	32
Pneumonia	8
Scarlet fever	2
Tuberculosis	29
Whooping cough	44

NORTH DAKOTA	Cases
Diphtheria	4
Measles	17
Mumps	3
Pneumonia	2
Scarlet fever	20
Smallpox	1
Tuberculosis	1
Whooping cough	21

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitus	Scarlet fever	Smallpox	Typhoid fever
May, 1926										
California	16	454	77	6	2,047	9	11	573	144	88
Hawaii	1	20	95	--------	10	--------	0	2	0	7
June, 1926										
Arizona	0	5	2	0	30	--------	0	31	0	30
Connecticut	5	53	16	0	1,612	--------	0	314	2	9
Indiana	1	56	76	--------	1,767	----	1	314	266	27

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended June 26, 1926. 37 States reported 1,087 cases of diphtheria. For the week ended June 27, 1925, the same States reported 1,024 cases of this disease. One hundred and two cities, situated in all parts of the country and having an aggregate population of more than 30,450,000, reported 763 cases of diphtheria for the week ended June 26, 1926. Last year for the corresponding week they reported 641 cases. The estimated expectancy for these cities was 753 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-four States reported 9,098 cases of measles for the week ended June 26, 1926, and 2,928 cases of this disease for the week ended June 27, 1925. One hundred and two cities reported 3,603 cases of measles for the week this year, and 1,677 cases last year.

Poliomyelitis.—The health officers of 37 States reported 22 cases of poliomyelitis for the week ended June 26, 1926. The same States reported 63 cases for the week ended June 27, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-seven States—this year, 2,127 cases: last year, 1,275 cases; 102 cities—this year, 1,240 cases; last year, 648 cases, estimated expectancy, 572 cases.

Smallpox.—For the week ended June 26, 1926, 37 States reported 355 cases of smallpox. Last year for the corresponding week they reported 444 cases. One hundred and two cities reported smallpox for the week as follows· 1926, 93 cases: 1925, 137 cases, estimated expectancy, 94 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—Four hundred and forty-one cases of typhoid fever were reported for the week ended June 26, 1926, by 36 States. For the corresponding week of 1925 the same States reported 786 cases

of this disease. One hundred and two cities reported 68 cases of typhoid fever for the week this year, and 146 cases for the corresponding week last year. The estimated expectancy for these cities was 103 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 96 cities, with a population of more than 29,750,000, as follows 1926, 449 deaths, 1925, 395 deaths.

City reports for week ended June 26, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	0	1	0	0	0	4	0	0
New Hampshire									
Concord	22,546	0	0	0	0	0	3	0	0
Manchester	83,097	0	1	0	0	0	8	0	2
Nashua	29,723	0	0	0	0	0	0	0	1
Vermont									
Barre	10,008	0	0	0	0	0	0	0	0
Massachusetts									
Boston	779,620	25	47	21	1	0	88	57	8
Fall River	128,993	0	3	0	3	0	2	0	1
Springfield	142,065	4	2	0	0	0	5	0	0
Worcester	190,757	3	3	1	0	0	2	3	4
Rhode Island									
Pawtucket	69,760	0	0	0	0	0	0	0	1
Providence	267,918	0	7	1	1	0	30	0	5
Connecticut									
Bridgeport	(1)	1	4	1	0	0	2	0	0
Hartford	160,197	3	4	1	0	0	2	0	6
New Haven	178,927	5	2	0	0	0	42	0	4
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	25	10	15	0	1	22	1	7
New York	5,873,356	161	227	200	12	6	239	84	102
Rochester	316,786	4	5	12	0	0	32	0	1
Syracuse	182,003	1	5	2	0	0	307	6	3
New Jersey									
Camden	128,642	6	3	8	1	1	14	0	1
Newark	452,513	32	12	5	0	0	53	17	10
Trenton	132,020	2	3	1	0	0	17	1	3
Pennsylvania									
Philadelphia	1,979,364	30	55	49		1	133	5	22
Pittsburgh	631,563	11	16	12		3	128	0	15
Reading	112,70[illegible]	1	3	1	0	0	12	0	1
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	0	6	7	0	0	86	12	6
Cleveland	936,485	73	18	27	0	0	16	2	12
Columbus	279,836	9	2	1	0	1	32	0	1
Toledo	287,380	45	5	3	0	1	115	0	4

[1] No estimate made.

City reports for week ended June 26, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
EAST NORTH CENTRAL—continued									
Indiana									
Fort Wayne	97,846	3	2	0	0	0	69	0	1
Indianapolis	358,819	17	3	1	0	1	8	4	4
South Bend	80,091	0	0	1	0	0	43	0	1
Terre Haute	71,071	1	0	1	0	0	11	0	1
Illinois									
Chicago	2,995,239	176	78	69	1	1	345	31	25
Peoria	81,564	3	1	1	0	0	11	0	0
Springfield	63,923	3	0	0	1	1	9	5	0
Michigan									
Detroit	1,245,824	59	35	112	0	0	34	2	16
Flint	130,316	7	2	1	0	0	81	0	4
Grand Rapids	153,698	2	2	0	0	0	63	0	1
Wisconsin									
Kenosha	50,891	2	0	0	0	0	62	0	1
Madison	46,385	8	0	0	0	0	49	1	2
Milwaukee	509,192	88	11	17	1	1	209	39	9
Racine	67,707	0	1	0	0	0	155	5	5
Superior	39,671	0	1	0	0	0	6	0	1
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	5	1	2	0	0	54	0	1
Minneapolis	425,435	67	11	30	0	1	21	0	7
St Paul	246,001	12	12	10	0	1	185	2	4
Iowa									
Davenport	(1)	6	0	0	0		1	0	
Des Moines	(1)	0	1	0	0		0	0	
Sioux City	(1)	0	1	0	0		7	0	
Waterloo	36,771	1	0	0	0		26	0	
Missouri									
Kansas City	367,481	2	4	0	1	1	21	0	2
St Joseph	78,342	1	1	1	0	0	5	0	0
St. Louis	821,543	9	28	50	0	0	113	2	
North Dakota									
Fargo	26,403	1	0	0	0	0	0	5	0
Grand Forks	14,811		0						
South Dakota									
Aberdeen	15,036	0	0	0	0		3	1	
Sioux Falls	30,127	0	0	3	0	0	3	0	0
Nebraska									
Lincoln	60,941	4	1	0	0	0	1	1	0
Omaha	211,768	7	2	0	0	0	31	0	7
Kansas									
Topeka	55,411	10	1	0	0	0	1	0	0
Wichita	88,367	1	0	2	0	0	3	0	0
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	1	1	0	0	0	5	0	1
Maryland									
Baltimore	796,296	39	13	9	2	2	18	45	18
Cumberland	33,741	1	0	1	0	0	1	0	1
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia									
Washington	497,906	15	5	8	0	0	90	0	9
Virginia									
Lynchburg	30,395	3	0	0	0	0	21	0	0
Norfolk	(1)	9	0	0	0	0	21	0	1
Richmond	186,403	6	2	3	0	1	112	0	4
Roanoke	58,208	0	1	0	0	0	4	0	3
West Virginia									
Charleston	49,019	1	1	0	1	0	10	0	3
Huntington	63,485	0	0	0	0	1	0	0	2
Wheeling	56,208	3	0	1	0	0	26	0	2
North Carolina:									
Raleigh	30,371	4	0	0	0	0	0	0	1
Wilmington	37,061	0	0	1	0	0	2	0	0
Winston-Salem	69,031	6	1	0	0	0	19	1	0

[1] No estimate made.

City reports for week ended June 26, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—con									
South Carolina									
Charleston	73,125	0	0	0	5	0	0	0	0
Columbia	41,225	7	0	0	0	0	0	0	0
Greenville	27,311	0	0	0	0	0	0	0	1
Georgia									
Atlanta	(1)	4	1	0	1	0	35	1	5
Brunswick	16,809	0	0	0	0	0	8	0	0
Savannah	93,134	1	0	0	0	0	0	0	0
Florida									
Miami	69,754	1	----	0	0	0	2	1	1
St. Petersburg	26,847	0	0	0	0	0	0	0	0
Tampa	94,743	0	0	1	0	0	1	0	1
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	1	0	0	0	2	0	1
Louisville	305,935	4	3	1	0	0	6	0	8
Tennessee									
Memphis	174,533	2	1	0	0	0	50	1	7
Nashville	136,220	1	0	0	0	0	4	0	1
Alabama									
Birmingham	205,670	3	1	1	2	1	48	2	6
Mobile	65,955	0	0	0	0	0	0	0	1
Montgomery	46,481	0	0	0	0	0	8	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	0	0	0	----	1	0	----
Little Rock	74,216	2	0	0	0	----	12	0	----
Louisiana									
New Orleans	414,493	1	5	4	4	3	4	0	6
Shreveport	57,857	0	0	0	0	0	0	0	1
Oklahoma									
Oklahoma City	(1)	1	0	0	0	0	0	0	1
Texas									
Dallas	194,450	5	2	3	2	2	0	2	2
Galveston	48,375	0	0	0	0	0	0	0	0
Houston	164,954	0	1	1	0	0	0	0	2
San Antonio	198,069	0	1	2	0	0	5	0	5
MOUNTAIN									
Montana									
Billings	17,971	3	0	0	0	0	1	0	1
Great Falls	29,883	2	0	3	0	0	33	0	0
Helena	12,037	0	0	1	0	0	0	0	2
Missoula	12,668	0	0	1	0	0	0	2	0
Idaho									
Boise	23,042	0	0	1	0	0	2	1	0
Colorado									
Denver	280,911	27	10	3	----	----	30	1	5
Pueblo	43,787	3	2	1	0	0	17	0	0
New Mexico									
Albuquerque	21,000	1	1	0	0	0	0	0	0
Utah									
Salt Lake City	130,948	5	3	3	0	0	4	5	3
Nevada									
Reno	12,665	0	0	0	0	0	0	0	1
PACIFIC									
Washington									
Seattle	(1)	15	5	0	0	----	44	13	----
Spokane	108,897	19	2	2	0	----	32	0	----
Tacoma	104,455	6	2	3	0	0	8	0	0
Oregon									
Portland	282,383	12	5	9	0	0	54	5	3
California									
Los Angeles	(1)	27	36	33	1	0	10	8	9
Sacramento	72,260	2	2	2	0	0	2	1	3
San Francisco	557,530	13	17	9	0	0	84	5	0

[1] No estimate made.

City reports for week ended June 26, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	1	1	0	0	0	0	1	0	0	0	14
New Hampshire											
Concord	0	3	0	0	0	0	0	0	0	0	4
Manchester	1	1	0	0	0	0	0	0	0	0	24
Nashua	0	1	0	0	0	1	0	0	0	0	6
Vermont											
Barre	0	0	0	0	0	0	0	0	0	0	5
Massachusetts											
Boston	28	60	0	0	0	12	3	2	0	46	177
Fall River	1	5	0	0	0	3	3	1	0	9	4
Springfield	3	3	0	0	0	3	0	0	0	9	28
Worcester	4	6	0	0	0	5	0	0	0	1	52
Rhode Island											
Pawtucket	0	1	0	0	0	0	0	0	0	0	13
Providence	4	2	0	0	0	4	0	1	0	5	67
Connecticut											
Bridgeport	4	10	0	0	0	3	1	0	0	0	31
Hartford	3	2	0	0	0	4	1	0	0	4	40
New Haven	2	7	0	0	0	2	1	0	0	9	34
MIDDLE ATLANTIC											
New York											
Buffalo	15	9	0	0	0	13	1	2	0	34	137
New York	105	267	0	0	0	[1] 117	16	8	0	74	1,227
Rochester	8	10	0	0	0	5	0	2	0	7	72
Syracuse	6	0	0	0	0	4	0	0	0	24	45
New Jersey											
Camden	2	6	0	0	0	2	0	1	0	0	27
Newark	12	31	0	1	0	15	0	0	0	29	102
Trenton	1	5	1	0	0	1	1	2	0	0	29
Pennsylvania											
Philadelphia	46	69	1	0	0	41	5	2	0	46	453
Pittsburgh	15	23	0	0	0	9	2	0	0	94	135
Reading	1	2	0	0	0	0	0	3	0	6	22
EAST NORTH CENTRAL											
Ohio											
Cincinnati	5	16	2	0	0	10	1	1	0	17	105
Cleveland	13	69	2	0	0	14	2	0	0	98	200
Columbus	3	28	1	0	0	6	1	0	0	4	54
Toledo	9	11	1	0	0	3	1	0	0	55	68
Indiana											
Fort Wayne	1	1	1	2	0	0	0	0	0	1	39
Indianapolis	6	10	4	16	0	4	0	2	0	25	64
South Bend	1	0	1	0	0	0	0	0	0	1	8
Terre Haute	1	0	1	0	0	0	0	0	0	0	10
Illinois											
Chicago	64	81	2	3	0	46	3	2	0	40	529
Peoria	1	2	0	0	0	1	0	0	0	1	10
Springfield	1	1	1	0	0	0	0	0	0	7	7
Michigan											
Detroit	44	116	5	0	0	30	3	0	0	59	269
Flint	2	16	1	0	0	2	0	0	0	5	17
Grand Rapids	3	10	0	0	0	2	0	0	0	3	30
Wisconsin											
Kenosha	1	0	1	0	0	0	0	0	0	2	6
Madison	1	3	0	0	0	0	0	0	0	1	15
Milwaukee	18	16	4	0	0	3	1	1	0	67	91
Racine	2	4	1	0	0	1	0	0	0	2	13
Superior	1	0	2	0	0	2	0	0	0	0	11
WEST NORTH CENTRAL											
Minnesota											
Duluth	2	18	3	0	0	0	0	0	0	1	18
Minneapolis	16	49	7	0	0	2	1	2	0	1	78
St Paul	11	14	2	1	0	3	1	0	0	24	59

[1] Pulmonary tuberculosis only.

City reports for week ended June 26, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL—con.											
Iowa:											
Davenport	0	2	2	0			0	0		0	
Des Moines	3	0	3	1			0	0		0	
Sioux City	1	13	2	5			0	0		4	
Waterloo	1	0	1	0			0	0		6	
Missouri:											
Kansas City	3	7	3	0	0	6	1	0	0	7	79
St. Joseph	0	1	0	0	0	3	0	0	0	2	43
St. Louis	14	56	1	6	0	9	3	0	0	47	174
North Dakota:											
Fargo	1	1	0	0	0	0	0	0	0	0	12
Grand Forks	0		0				0				
South Dakota:											
Aberdeen	1	2	0	0			0	0		6	
Sioux Falls	0	1	1	0	0	0	0	0	0	0	4
Nebraska:											
Lincoln	1	1	0	1	0	1	0	0	0	7	12
Omaha	2	15	4	10	0	3	1	0	0	2	42
Kansas:											
Topeka	1	1	1	0	0	1	1	0	0	6	13
Wichita	1	2	3	0	0	1	0	0	0	8	29
SOUTH ATLANTIC											
Delaware:											
Wilmington	3	3	0	0	0	0	0	1	0	2	22
Maryland:											
Baltimore	12	49	0	0	0	20	3	3	1	45	225
Cumberland	0	0	0	0	0	0	1	0	0	0	9
Frederick	0	0	0	0	0	0	0	0	0	0	2
District of Columbia:											
Washington	8	15	0	1	0	13	2	0	0	24	134
Virginia:											
Lynchburg	1	1	1	0	0	0	1	0	0	9	11
Norfolk	0	3	0	0	0	4	1	0	0	22	
Richmond	1	3	1	0	0	2	1	3	1	2	57
Roanoke	0	0	0	5	0	1	1	0	0	0	11
West Virginia:											
Charleston	1	1	1	0	0	0	1	0	0	9	26
Huntington	0	0	0	0	0	0	1	0	0	0	20
Wheeling	1	3	0	0	0	0	1	0	0	0	14
North Carolina:											
Raleigh	0	0	0	0	0	3	1	0	0	9	15
Wilmington	0	1	0	0	0	1	0	0	0	10	10
Winston-Salem	0	1	1	1	0	0	1	0	0	7	15
South Carolina:											
Charleston	0	0	1	4	0	2	1	4	0	2	31
Columbia	0	0	1	0	0	0	1	2	0	0	
Greenville	0	0	1	0	0	0	1	1	0	2	8
Georgia:											
Atlanta	3	1	5	2	0	6	3		3	2	73
Brunswick	0	0	0	0	0	0	1	0	0	0	3
Savannah	0	0	0	0	0	4	2	0	0	0	31
Florida:											
Miami		0		0	0	2		3	0	32	47
St. Petersburg	0	0	1	0	0	1	0	0	0	0	8
Tampa	0	0	0	1	0	0	1	2	0	0	28
EAST SOUTH CENTRAL											
Kentucky:											
Covington	0	0	1	0	0	2	1	0	0	0	13
Louisville	2	5	0	0	0	5	2	3	0	0	78
Tennessee:											
Memphis	1	2	1	13	0	12	3	0	0	9	85
Nashville	1	0	1	1	0	5	3	2	0	5	52
Alabama:											
Birmingham	1	1	2	2	0	9	3	0	0	23	84
Mobile	1	0	1	0	0	0	1	2	0	1	22
Montgomery	1	1	0	1	0	0	1	0	0	0	19

City reports for week ended June 26, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	0	0			0	0		4	
Little Rock	0	0	0	0	0	1	1	0	0	2	
Louisiana											
New Orleans	2	2	1	0	0	13	5	2	0	7	136
Shreveport	0	1	1	0	0	0	2	1	0	0	21
Oklahoma											
Oklahoma City	0	0	3	0	0	1	1	0	0	0	22
Texas											
Dallas	2	4	1	1	0	1	2	1	1	10	44
Galveston	0	0	0	0	0	0	0	0	0	0	6
Houston	1	0	0	2	0	6	1	1	0	1	57
San Antonio	0	0	0	1	0	6	1	2	0	0	51
MOUNTAIN											
Montana											
Billings	0	5	0	0	0	0	0	0	0	0	5
Great Falls	2	0	1	0	0	1	0	0	0	0	2
Helena	0	0	0	0	0	0	0	0	0	0	3
Missoula	0	0	0	0	0	0	0	0	0	0	4
Idaho											
Boise	0	0	1	1	0	0	0	0	0	0	5
Colorado											
Denver	7	4	0	0	0	9	1	0	0	23	54
Pueblo	1	0	0	0	0	2	0	0	0	0	13
New Mexico											
Albuquerque	0	1	0	0	0	3	0	0	0	2	15
Utah											
Salt Lake City	2	4	1	0	0	0	0	0	0	52	25
Nevada											
Reno	0	0	0	1	0	0	0	0	0	0	3
PACIFIC											
Washington											
Seattle	8	10	3	0			1	0		4	
Spokane	3	8	3	0			0	0		3	
Tacoma	2	2	2	6	0	1	0	0	0	2	18
Oregon											
Portland	5	17	6	6	0	3	1	2	0	2	56
California											
Los Angeles	14	29	3	5	0	21	3	6	0	2	198
Sacramento	1	3	0	1	0	1	1	0	0	0	22
San Francisco	11	7	1	0	0	14	1	0	1	1	124

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Maine									
Portland	0	0	0	0	0	0	0	1	0
Massachusetts									
Boston	0	0	2	0	0	0	0	0	0
Connecticut									
Bridgeport	0	0	1	0	0	0	0	0	0

City reports for week ended June 26, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
MIDDLE ATLANTIC									
New York									
Buffalo	0	0	0	1	0	0	0	0	0
New York [1]	0	1	6		0	0	2	1	0
New Jersey									
Newark	2	0	0	0	0	0	1	0	0
Trenton	0	0	0	1	0	0	0	0	0
Pennsylvania									
Philadelphia	0	0	0	2	0	0	0	0	0
Pittsburgh	0	1	0	0	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio									
Cleveland	0	0	1	0	0	0	1	0	0
Columbus	0	0	0	1	0	0	0	0	0
Toledo	0	0	0	0	0	0	0	1	1
Illinois									
Chicago	1	0	0	1	0	0	0	0	0
Michigan									
Detroit	0	0	0	1	0	0	1	0	0
WEST NORTH CENTRAL									
Minnesota									
Minneapolis	0	0	1	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore [1]	1	1	0	0	0	0	1	0	0
District of Columbia									
Washington	0	0	0	0	1	0	0	0	0
South Carolina									
Charleston	0	0	0	0	12	1	0	0	0
Georgia									
Savannah	0	0	0	0	0	1	0	0	0
EAST SOUTH CENTRAL									
Alabama									
Birmingham	0	0	0	0	1	0	1	0	0
Mobile	0	0	1	0	0	0	0	1	1
Montgomery	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	1	0	0	0	2	0	0	0
Louisiana:									
New Orleans	0	0	0	0	1	1	0	0	0
Shreveport	0	0	0	0	0	1	0	0	0
Texas									
Dallas	0	0	0	0	0	0	0	1	1
PACIFIC									
Oregon									
Portland	0	1	0	0	0	0	0	0	0
California									
Los Angeles [2]	2	0	0	0	1	0	0	0	0
San Francisco	0	0	0	0	1	0	0	0	0

[1] Typhus fever 1 case New York City, 1 case Baltimore, Md.
[2] Rabies in man: 1 death Los Angeles, Calif

The following table gives the rates per 100,000 population for 103 cities for the five-week period ending June 26, 1926, compared with those for a like period ended June 27, 1925. The population figures used in computing the rates are approximate estimates as of July 1,

1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 103 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, May 23 to June 26, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended									
	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926
103 cities	[2] 144	[3] 122	[4] 152	[3] 117	116	[3] 136	114	[5] 113	112	[3] 131
New England	110	80	125	75	91	69	93	78	122	50
Middle Atlantic	210	145	243	134	155	155	166	124	163	152
East North Central	100	108	92	119	89	146	86	131	78	161
West North Central	187	[3] 163	183	[3] 207	141	[3] 231	129	[3] 167	111	[3] 195
South Atlantic	[2] 72	96	[4] 88	47	54	60	48	[6] 66	69	45
East South Central	11	42	11	16	11	26	5	16	32	10
West South Central	62	65	40	56	66	47	70	43	44	43
Mountain	139	127	74	109	176	127	185	146	102	118
Pacific	160	159	138	132	157	159	108	[7] 94	102	132

MEASLES CASE RATES

	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926
103 cities	[2] 569	[3] 1,283	[4] 594	[3] 1,014	558	[3] 928	416	[5] 732	292	[3] 617
New England	836	1,064	841	728	860	659	611	494	393	425
Middle Atlantic	701	956	771	751	724	707	542	585	380	476
East North Central	839	1,252	825	1,103	779	1,018	547	943	377	828
West North Central	137	[3] 3,061	111	[3] 2,209	131	[3] 2,038	84	[3] 1,260	58	[3] 935
South Atlantic	[2] 242	1,542	[4] 393	1,213	280	1,103	330	[6] 788	263	701
East South Central	200	2,376	121	1,660	194	1,396	105	695	121	612
West South Central	13	112	22	86	13	125	18	77	4	95
Mountain	240	1,302	37	1,247	92	919	74	701	92	792
Pacific	157	803	157	696	83	593	80	[7] 602	50	485

SCARLET FEVER CASE RATES

	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926
103 cities	[2] 267	[3] 274	[4] 256	[3] 231	170	[3] 261	159	[5] 233	113	[3] 212
New England	204	258	256	248	173	255	137	203	103	236
Middle Atlantic	270	212	262	209	155	195	144	221	99	210
East North Central	321	339	293	247	198	333	202	340	146	253
West North Central	514	[3] 695	466	[3] 416	315	[3] 621	317	[3] 450	179	[3] 354
South Atlantic	[2] 115	160	[4] 125	190	58	160	58	[6] 131	42	152
East South Central	168	171	116	195	147	78	147	47	84	47
West South Central	62	116	84	163	44	86	35	69	53	30
Mountain	398	100	324	218	268	118	139	127	203	118
Pacific	133	181	144	170	155	237	110	[7] 220	102	159

[1] The figures given in this table are rates per 100,000 population, annual basis—and not the number of cases reported Populations used are estimated as of July 1, 1925 and 1926, respectively

[2] Charleston, W Va, not included

[3] Grand Forks, N Dak, not included

[4] Wilmington, N C, not included

[5] Grand Forks, N. Dak, Lynchburg, Va, and Tacoma, Wash., not included.

[6] Lynchburg, Va, not included

[7] Tacoma, Wash, not included.

Summary of weekly reports from cities, May 23 to June 26, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925—Continued

SMALLPOX CASE RATES

	Week ended									
	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926
103 cities	[2] 47	[3] 19	[4] 45	[3] 15	36	[3] 16	35	[5] 11	24	[3] 16
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	2	1	4	0	2	0	1	0	0	0
East North Central	54	13	61	9	40	12	42	10	19	14
West North Central	65	[3] 44	92	[3] 40	50	[3] 28	58	[3] 32	36	[3] 44
South Atlantic	[2] 10	28	[4] 37	34	21	38	29	[6] 30	13	26
East South Central	389	62	105	83	273	52	184	10	121	88
West South Central	53	99	31	43	4	34	18	26	0	17
Mountain	55	36	37	27	28	46	18	27	28	18
Pacific	160	32	182	24	141	54	146	[7] 20	163	32

TYPHOID FEVER CASE RATES

	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926
103 cities	[2] 15	[3] 10	[4] 24	[3] 9	27	[3] 12	21	[5] 11	25	[3] 12
New England	17	7	29	0	24	17	19	19	17	9
Middle Atlantic	9	5	26	9	17	6	14	9	18	10
East North Central	7	9	9	5	9	4	6	4	8	4
West North Central	10	[3] 4	8	[3] 8	24	[3] 6	12	[3] 10	10	[3] 4
South Atlantic	[2] 39	26	[4] 39	32	61	26	46	[6] 25	67	30
East South Central	47	31	37	10	110	57	71	21	84	36
West South Central	62	13	84	9	110	52	123	30	128	30
Mountain	9	0	74	9	46	9	37	0	0	0
Pacific	8	11	8	8	14	13	6	[7] 9	19	16

INFLUENZA DEATH RATES

	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926
96 cities	[2] 12	12	[4] 10	8	7	10	6	[6] 7	6	5
New England	7	9	2	2	5	12	2	9	7	0
Middle Atlantic	9	11	11	6	6	9	4	9	6	6
East North Central	13	11	10	8	6	10	7	3	6	3
West North Central	17	13	4	8	8	4	6	1	4	6
South Atlantic	[2] 12	11	[4] 6	8	4	6	6	[6] 4	2	6
East South Central	37	20	47	36	16	36	32	16	16	5
West South Central	29	9	5	14	19	19	10	24	10	24
Mountain	0	9	28	18	9	9	0	0	9	0
Pacific	7	11	11	4	4	0	4	4	4	0

PNEUMONIA DEATH RATES

	May 30, 1925	May 29, 1926	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926
96 cities	[2] 119	[2] 120	[4] 123	[2] 105	99	95	78	[6] 87	65	74
New England	110	123	69	116	113	102	60	87	58	69
Middle Atlantic	145	145	167	130	130	109	93	95	75	83
East North Central	111	106	107	48	79	87	76	74	45	61
West North Central	57	83	55	50	57	58	32	75	51	44
South Atlantic	[2] 147	[2] 111	[4] 138	[2] 80	115	96	75	[6] 112	90	94
East South Central	158	171	116	125	88	125	95	99	110	125
West South Central	73	109	63	99	82	94	87	71	73	76
Mountain	74	91	92	146	102	82	139	100	55	109
Pacific	73	64	116	67	44	67	58	75	47	43

[2] Charleston, W. Va, not included
[3] Grand Forks, N Dak, not included
[4] Wilmington, N C, not included
[5] Grand Forks, N Dak, Lynchburg, Va, and Tacoma, Wash, not included
[6] Lynchburg, Va, not included.
[7] Tacoma, Wash., not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	103	96	29,944,996	30,473,129	29,251,658	29,764,201
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	14	11	2,594,962	2,634,662	2,461,380	2,499,036
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended June 12, 1926.—The following report for the week ended June 12, 1926, was transmitted by the Far Eastern Bureau of the Health Section of the League of Nations' Secretariat, located at Singapore, to the headquarters at Geneva.

Maritime towns	Plague		Cholera		Smallpox		Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths		Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt Suez	3	0	0	0	0	0	French Indo-China						
Iraq Basrah	0	0	0	0	1	1	Saigon and Cholon	0	0	19	12	0	0
British India							Haiphong	0	0	103	73	0	0
Calcutta	----	0	----	41	8	7	China Amoy	8	----	0	0	2	0
Bombay	----	4	----	0	34	18	Japan						
Madras	----	0	----	0	1	0	Simonoseki	0	0	0	0	1	0
Karachi	----	6	----	0	7	4	Osaka	0	0	0	0	3	0
Negapatam	----	0	----	0	1	1	Kwantung						
Siam Bangkok	0	0	116	50	4	4	Dairen	0	0	0	0	3	1
Hongkong	0	0	0	0	2	1	Port Arthur	0	0	0	0	1	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

British India.—Chittagong, Cochin, Tuticorin, Vizagapatam
Federated Malay States.—Port Swettenham.
Straits Settlements.—Penang, Singapore
Sarawak.—Kuching
British North Borneo.—Sandakan.
Portuguese Timor.—Dilly
Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.
French Indo-China.—Turane.
China.—Shanghai.
Formosa.—Keelung
Japan.—Nagasaki, Yokohama, Moji, Kobe, Niigata, Tsuruga, Hakodate.
Korea.—Chemulpo, Fusan.
Manchuria.—Antung, Mukden, Changchun, Harbin.
U. S. S. R.—Vladivostok

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island
New Guinea.—Port Moresby
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia.—Noumea.
Hawaii.—Honolulu.

AFRICA

Egypt.—Alexandria, Port Said.
Anglo-Egyptian Sudan.—Port Sudan.
Eritrea.—Massaua.
French Somaliland.—Jibuti.
British Somaliland.—Berbera.
Italian Somaliland.—Magadiscio.
Kenya.—Mombasa.
Tanganyika.—Dar-es-Salaam.
Seychelles.—Victoria.
Mauritius.—Port Louis.
Portuguese East Africa.—Mozambique, Beira, Lourenço, Marques.
Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

British India.—Rangoon.
Dutch East Indies.—Batavia, Surabaya, Samarang, Cheribon, Belawan, Deli, Palembang, Sabang, Makassar, Menado, Banjermasin, Balik-Papan, Tarakan, Pontianak, Padang.
Madagascar.—Tamatave, Majunga.
Zanzibar.—Zanzibar.

CHOLERA ON VESSEL

Steamship "Kola"—In Gulf of Siam.—Under date of May 20, 1926, information was received of the occurrence of two cases of cholera, both fatal, on the steamship *Kola* en route to Koh Phra quarantine station, Siam. The cases occurred in the persons of the captain and chief engineer of the *Kola*, and developed when the vessel was entering the Gulf of Siam.

CANADA

Communicable diseases—Week ended June 19, 1926, and week ended June 26, 1926.—The Canadian Ministry of Health reports certain communicable diseases in five provinces of Canada for week ended June 19, and in seven Provinces for week ended June 26, 1926, as follows:

WEEK ENDED JUNE 19, 1926

Disease	Nova Scotia	New Brunswick [1]	Quebec	Ontario	Manitoba	Saskatchewan	Alberta [1]	Total
Influenza	1							1
Lethargic encephalitis				1				1
Poliomyelitis						1		1
Smallpox				6	1	9		16
Typhoid fever	4		9	11	3	3		30

WEEK ENDED JUNE 26, 1926

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal fever		2	2	1				5
Influenza	23							23
Poliomyelitis				2				2
Smallpox				6	2			8
Typhoid fever		1	2	7	1	2	1	14

[1] No report for the week ended June 19, 1926.

Measles—Edmonton (Alberta)—April–May, 1926.—During the month of April, 1926, 1,012 cases of measles with 4 deaths were reported at Edmonton, Alberta, Canada, and during the month of May, 1926, 578 cases with 1 death.

ECUADOR

Plague—Guayaquil—May 16–June 15, 1926.—Plague has been reported at Guayaquil, Ecuador, as follows May 16–31, 1926, four cases; June 1–15, 1926, one case

Plague-infected rats.—Period May 16–31, 1926—11,110 rats taken, 12 rats found plague infected; June 1–15, 1926—9 767 rats taken, 6 rats found infected.

EGYPT

Plague—May 29–June 3, 1926—Summary—During the week ended June 3, 1926, 8 cases of plague were reported in Egypt, of which 2 cases occurred in the city of Suez The total number of cases reported from January 1 to June 3, 1926, was 51, as compared with 57 during the corresponding period of 1925.

Later occurrence.—On June 8, two cases of bubonic plague with one death were reported at Suez, and on June 10 one death in hospital In the Province of Beni-Suef, June 5 to 8, three cases of bubonic plague were reported.

PERU

Plague—May, 1926—During the month of May, 1926, 23 cases of plague with 10 deaths were reported in Peru. The reported occurrence was for the departments of Ica, Libertad, and Lima. In the departments of Ancash and Cajamarca plague was reported present during the period referred to. For further information relative to locality of occurrence see page 1506.

SIAM

Further relative to cholera—Bangkok.—Epidemic cholera was reported present at Bangkok, Siam, from October 1 to December 26, 1925, with 431 cases and 258 deaths, and from December 27, 1925, to March 13, 1926, with 386 cases and 249 deaths.[1] Under date of May 14, 1926, there were reported for the period March 14 to May 8, 1926, 964 cases of cholera with 587 deaths.

Inoculation against cholera.—It was stated under date of May 15, 1926, that free inoculations against cholera were administered at the Pasteur Institute of Bangkok to all persons applying and that in the registration area of Bangkok 5,538 persons were inoculated during the week ended May 1 and 1,508 during the week ended May 8,

[1] Public Health Reports, May 21, 1926, p 1013.

1926; also that placards had been publicly posted urging the people not to drink canal water.

Hospitalization.—Hospital accommodations were stated to be insufficient and cholera patients were being treated at general hospital or at their homes. Water from the city supply was supplied by water boats to sections of the city where a shortage of water was reported.

General distribution of cholera in Siam—April 1–May 8, 1926.—During the period May 2 to 8, 1926, 698 cases of cholera with 463 deaths, were reported in Siam, and from April 1 to May 8, 2,116 cases with 1,431 deaths, occurring in 28 towns.

TUNISIA

Further relative to plague—Kairouan.[2]—Under date of June 11, 1926, the outbreak of plague reported in the vicinity of Kairouan, Tunisia, during the last weeks in May, 1926, was reported still present, with a few new cases occurring in the initial contaminated district. On June 6, a second contaminated district was discovered, with 7 cases present, at a locality south of the railway and 13 kilometers distant from Kairouan. Two plague deaths have been reported, one occurring near Sfax and one in Somra des Souassi. In both, the infection was stated to have originated at Zlass. No spread from these fatal cases was reported.

UNION OF SOUTH AFRICA

Plague—May 16–22, 1926.—During the week ended May 22, 1926, plague was reported in the Union of South Africa in the Cape Colony in Middleburg district, with the death of the case, European reported during the previous week[2] at Sakfontein, and two new cases—European, one, native, one—occurring on the same farm, the type of the disease in both cases being pneumonic. In the Orange Free State two new fatal cases occurring in natives were reported at Protestpan, in Hoopstad district, 15 miles from Bultfontein.[2]

Typhus fever.—Sporadic cases have been reported during the period referred to, one at Orange, East London district, Cape Province, one at Quibcer, Victoria East, and one at Mossel Bay.

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[2] Public Health Reports, July 9, 1926, p 1457

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended July 16, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 1, 1926 Cases, 30; deaths, 24
French Settlements in India				Mar 7-Apr 10, 1926 Cases, 13, deaths, 13
India				May 2-8, 1926 Cases, 2,805, deaths, 1,715 May 9-15, 1926. Cases, 2,683, deaths, 1,488
Madras	May 30-June 5	1	1	
Rangoon	May 16-29	13	12	
Indo-China				
Saigon	May 9-15	32	30	Report covers Saigon and Cholon.
Philippine Islands				
Manila	May 18-24	2	2	
Provinces—				
Albay	Apr 18-24	1	1	
Mindoro	Feb 21-27	1	1	
Siam				
Bangkok	May 16-22	262	192	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Azores				
St Michaels				
Arrifes	May 9-15	1		
Livramente	May 15-29	2	1	
China				
Amoy	May 1-29		30	Stated to be quite prevalent in city of Amoy
Nanking	May 24-June 5			Prevalent.
Ecuador				
Guayaquil	May 16-31	4		Rats taken May 16-31, 1926, 11,110, found infected, 12
Do	June 1-15	1		Rats taken June 1-15, 1926, 9,767, found infected, 6
Egypt				May 29-June 3, 1926 Cases, 8 Jan 1-June 3, 1926, cases, 51, corresponding period, 1925, cases, 57.
City—				
Suez	May 29-June 3	2		
Do	June 8-10	2	2	Bubonic
Province—				
Beni-Suef	June 5-8	3		Do
India				May 2-8, 1926 Cases, 9,894; deaths, 8,026
Bombay	May 16-22	4	5	
Karachi	May 30-June 5	3	3	
Madras Presidency	May 9-15	21	22	
Rangoon	May 23-29	1	1	
Iraq.				
Bagdad	do	24	15	
Japan				
Yokohama	Reported July 6		3	
Java				
Batavia	May 15-21	18	18	
Nigeria				Feb 1-Mar 31, 1926 Cases, 81; deaths, 62
Peru				May, 1926 Cases, 23, deaths, 10.
Departments—				
Ancash	May 1-31			Present
Cajamarca	do			Do
Ica	do	1		
Libertad	do	4		Pacasmayo, cases, 2, Trujillo district, cases, 2
Lima	do	18	10	Lima City, 1 case, country estates, 1
Russia				Jan 19-Feb 25, 1926 Cases, 7.
Senegal				Nov 1-30, 1926 Cases, 3, deaths, 2
Straits Settlements.				
Singapore	May 2-8	1	1	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended July 16, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				May 16-22, 1926 Cases, 4, deaths, 3
Cape Colony	May 16-22	2	1	European 1, native 1, pneumonic, death of case, European, previously reported
Orange Free State—Hoopstad district—Protestpan	do	2	2	Locality 15 miles from Bultfontein Previously reported infected

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Canada:				
Manitoba	June 13-26	3		
Ontario	do	12		
Kingston	do	2		
Saskatchewan	June 13-19	9		
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-29		8	
Chungking	May 16-29			Present
Manchuria—				
An-shan	May 30-June 5	1		South Manchuria Ry.
Changchun	do	3		Do
Dairen	May 10-30	23	2	Do
Fushun	May 30-June 5	1		Do
Kai-yuan	do	3		Do
Nanking	May 23-June 5			Present
Swatow	May 16-29			Sporadic
France	Mar. 1-31	68		
French Settlements in India	Mar 7-Apr 10	127	127	
Great Britain				
Nottingham	May 30-June 5	1		
Sheffield	June 13-19	1		
India				May 2-8, 1926 Cases, 6,790; deaths, 1,675 May 9-15, 1926. Cases, 7,478, deaths, 1,942
Bombay	May 16-22	32	24	
Karachi	May 30-June 5	5	2	
Rangoon	May 16-29	4	1	
Indo-China				
Saigon	May 9-15	1		Including Cholon
Iraq				
Bagdad	May 23-29	2		
Italy				Mar. 28-Apr 17, 1926 Cases, 10.
Japan				
Kobe	May 30-June 5	1		
Java				
Batavia	May 15-21	1		Province.
East Java and Madoera	May 2-8	3	1	
Mexico				
Aguascalientes	June 13-26		5	
San Luis Potosi	do		7	
Nigeria	Feb 1-Mar 31	270	12	
Poland	Mar 28-May 1	12	1	
Russia	Jan. 1-31	492		
Siam:				
Bangkok	May 16-22	6	3	
Tunisia	Apr 1-May 10	6		

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Bulgaria				Mar 1-31, 1926 Cases, 37; deaths, 10.
Chile				
Antofagasta	June 6-12	3		
Valparaiso	Apr 29-May 5		1	
Chosen	Feb 1-28	228	18	
Ireland				
Cobh (Queenstown)	May 30-June 5	1		
Italy				Mar 28-Apr 17, 1926: Cases, 2
Japan				Mar. 28-Apr 10, 1926 Cases, 15.
Lithuania				Mar 1-31, 1926 Cases, 38, deaths, 5.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended July 16, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Mexico:				
Mexico City	June 13-19	9		Including municipalities in the Federal District
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-31, 1926. Cases, 140
Poland				May 2-8, 1926 Cases, 107, deaths, 7
Rumania				Mar 1-31, 1926 Cases, 41
Russia				Jan 1-31, 1926 Cases, 2,956
Tunisia				Apr 1-May 10, 1926 Cases, 64.
Yugoslavia				
Zagreb	May 15-21	1		

Reports Received from June 26 to July 9, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
India				Apr 25-May 1, 1926 Cases, 2,880, deaths, 1,943
Calcutta	Apr 4-May 22	420	379	
Madras	May 16-22	1		
Rangoon	May 9-15	5	1	
Indo-China				
Saigon	May 2-8	20	18	
Siam				
Bangkok	May 2-15	582	316	

PLAGUE

Place	Date	Cases	Deaths	Remarks
China:				
Amoy	Apr 18-May 1			Prevalent
Nanking	May 9-22			Do
Egypt				May 21-27, 1926 Cases, 4 Jan. 1-May 27, 1926 Cases, 43.
City—				
Suez	May 21-27	2		
Do	May 28-30	4	3	Bubonic, 1 case, 2 deaths, 1 case, 1 death, pneumonic
Province—				
Beni-Suef	May 28-June 3	5	2	Bubonic and septicemic
Gharbieh	June 2	1	1	Bubonic.
Greece				
Athens	Apr 1-30	7	2	Including Piræus
Do	May 1-31	9	2	Do
Patras	May 27	2	1	
Zante	May 17	1		
India:				Apr 25-May 1, 1926 Cases, 10,436, deaths, 8,214
Bombay	May 2-15	5	4	
Karachi	May 23-29	1	1	
Madras Presidency	Apr 25-May 1	16	13	
Rangoon	May 9-15	4	3	Plague-infected rats, January-April, 1926 57.
Iraq				
Bagdad	Apr 18-May 15	83	56	
Java				
Batavia	Apr 24-May 7	21	21	
Cheribon	Apr 11-24	3	3	
Madagascar				Apr 1-15, 1926: Cases, 42, deaths, 39
Moramanga Province	Apr 1-15	2	2	Septicemic
Tananarive Province—				
Tananarive Town	do	3	3	Pneumonic and septicemic
Other localities	do	37	34	Bubonic, pneumonic, septicemic.
Tunisia				
Kairouan	June 9	3		In territory 30 miles south of Kairouan, 9 cases.

[1] From medical officers of the Public Health Service, American consuls, and other sources. For reports received from Dec 26, 1925, to June 25, 1926, see Public Health Reports for June 25, 1926 The tables of epidemic diseases are terminated semiannually and new tables begin.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 9, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				
Cape Province—				
Middelburg District	May 9-15	3	2	Occurring on farm. In Europeans
Orange Free State—				
Hoopstad district—				
Protestpan	do	1	1	In native Locality 15 miles from Bultfontein

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-31	4		
Brazil				
Para	May 16-29	6	7	
Rio de Janeiro	May 2-22	76	24	
Santos	Mar 1-7		1	
Canada				May 30-June 12, 1926 Cases, 46
Alberta	May 30-June 12	3		
Manitoba	do	12		
Winnipeg	June 6-12	5	1	
Ontario				May 30-June 12, 1926 Cases, 24
Kingston	May 23-29	3		
North Bay	May 2-22	5		
Saskatchewan				May 30-June 12, 1926 Cases, 7.
China				
Chungking	May 2-15			Present
Foochow	May 9-22			Do.
Hongkong	May 2-15	4	3	
Manchuria—				
An-shan	May 16-22	1		South Manchuria Ry.
Antung	do	2		Do
Changchun	do	2		Do.
Dairen	Apr 26-May 9	31	6	
Fushun	May 16-22	3		Do
Harbin	May 14-27	14		
Kai-yuan	do	1		Do
Liao-yang	do	2		Do.
Mukden	do	1		Do
Penhsihu	do	2		Do
Teshihchiao	do	1		Do
Wa-feng-tien	do	3		Do.
Nanking	May 8-22			Present.
Shanghai	May 2-22	7	24	Cases, foreign Deaths, population of international concession, foreign and native.
Swatow	May 9-15			Sporadic.
Wanshein	May 1			Present among troops.
Egypt				
Alexandria	May 15-21	5		
Great Britain				
England—				
Bradford	May 23-29	1		
Newcastle-on-Tyne	June 6-12	1		
India				Apr 25-May 1, 1926. Cases, 6,675, deaths, 1,719.
Bombay	May 2-15	56	24	
Calcutta	Apr 4-22	165	150	
Karachi	May 16-29	24	8	
Madras	do	5	3	
Rangoon	May 9-15	2	1	
Iraq				
Bagdad	do	1		
Basra	Apr. 18-May 22	20	13	
Japan				
Nagoya	May 16-22		1	
Taiwan Island	May 11-20	24		
Yokohama	May 2-8	2		
Java				
East Java and Madoera	Apr 11-May 1	13		
Malang	Apr 4-10	6	1	Interior.
Latvia	Apr 1-30	3		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 9, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Mexico				
Guadalajara	June 8-14		2	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
San Antonio de Arenales	Jan 1-June 30			Present, 100 miles from Chihuahua
Tampico	June 1-10		2	
Torreon	May 1-31		10	
Poland				Apr 4-May 1, 1926 Cases, 14.
Portugal				
Lisbon	Apr 26-May 23		3	
Oporto	May 23-June 5	4		
Siam				
Bangkok	May 2-15	2	5	
Straits Settlements				
Singapore	Apr 25-May 1	1		
Union of South Africa				
Transvaal—				
Johannesburg	May 9-15	1		

TYPHUS FEVER

Algeria				
Algiers	May 21-31	2	1	
Chile				
Antofagasta	May 23-29	3		
China				
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanhsien				Present among troops, May 1, 1926 Locality in Chungking consular district
Ireland (Irish Free State)				
Cork	June 5	1		
Mexico				
Mexico City	May 16-June 5	20		Including municipalities in Federal District
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-May 1, 1926 Cases, 573, deaths, 48
Union of South Africa				April, 1926 Cases, 85, deaths, 14 (colored), European, 2 cases: Total, 87 cases, 14 deaths
Cape Province				Apr 1-30, 1926 Cases, 71, deaths, 11 Native
Do	May 9-15			Outbreaks
Grahamstown	do	1		Sporadic
Natal				Apr 1-30, 1926 Cases, 4. Native
Orange Free State				Apr 1-30, 1926 Cases, 7 Native
Transvaal				Apr 1-30, 1926 Cases, 3; deaths, 3 Native

YELLOW FEVER

Brazil				
Bahia	May 9-22	3	2	

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TREASURY DEPARTMENT

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BY THE UNITED STATES PUBLIC HEALTH SERVICE

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SPECIAL ARTICLES

Report of a State-Wide Smallpox Survey in Tennessee

Studies of Benzol Pcisoning in Certain Industries

WASHINGTON
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1926

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen B J LLOYD, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912

They contain (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world (2) Articles relating to the cause, prevention, or control of disease. (3) Other pertinent information regarding sanitation and the conservation of the public health.

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PUBLIC HEALTH REPORTS

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A STATE-WIDE SMALLPOX SURVEY IN TENNESSEE

By W. J. BREEDING, M D., Director, Division of Health Education, and E A LANE, M D, Epidemiologist, Tennessee State Department of Health

Smallpox has been more or less prevalent in Tennessee for a great many years, although it has not been present in severe form in recent years. In view of the increasing prevalance of the disease in 1923 and 1924 and the presence of a large nonimmune population in the State, combining to create a grave potential danger, the State Health Commissioner instituted a State-wide smallpox survey and educational and vaccination campaign early in 1925. The primary twofold purpose of the survey was to secure, directly from the field, specific information with regard to the smallpox situation throughout the State, and to bring the matter personally to the attention of the local civil and health authorities.

Tennessee has an area of 42,022 square miles. It is long and narrow, being 430 miles long (east and west) and 110 miles in width (north and south). It borders on eight States. On the basis of population, resources, and topography, it may be divided into three sections—east, middle, and west. In 1920, the population as of January 1 was 2,337,885, about one-fifth of whom were negroes, the percentage of negroes becoming progressively higher from east to west. The State has 95 counties, ranging in population from 2,600 (in the mountainous section of east Tennessee) to 58,000 (Hamilton County, exclusive of Chattanooga). In 1920, there were eight cities with 10,000 population or more, the largest being Memphis, with 162,351.

Chapter 519 of the Acts of 1905 provides for the notification and control of communicable diseases. Sections 8 and 9 of this act give to the local health officers and boards of health authority to adopt compulsory vaccination, without authorization by the State board of health, whenever such action is deemed necessary. Many cities and towns have ordinances requiring compulsory vaccination for school attendance, which, however, are not strictly enforced. Only a few counties—possibly not more than eight—have similar county regulations, which, for the most part, also lack enforcement.

One of the writers (Doctor Breeding) was detailed by the State commissioner of health to make the field investigation and State-wide educational campaign. Preparatory to this work, data were collected

relative to the smallpox situation in the State and throughout the country. A questionnaire was prepared to record the data, and a mimeographed letter addressed to school-teachers was prepared to accompany a brief article on smallpox and vaccination. The teachers were requested to read the article to the pupils. The subject of smallpox was also given publicity in the newspapers and in Health Briefs, the monthly bulletin of the State department of health, which had a selected mailing list of over 4,000 persons, including all physicians in the State.

A short time after the conclusion of the survey, a general letter of warning concerning the smallpox situation and an outline of an approved vaccination technique were sent to each health officer in the State.

The field work was begun May 18, 1925, and between that date and October 23 each of the 95 counties of the State was visited and inquiry was made concerning recent and past prevalence of smallpox, the approximate immunity status of the population, the cost of past control measures, and provisions made for prevention and control of future possible outbreaks of smallpox. With regard to the latter, special emphasis was placed upon the advisability of requiring all children to be vaccinated as a prerequisite for admission to school.

The accompanying table presents data relative to the occurrence of smallpox in Tennessee during the period 1916–1925.

Smallpox in Tennessee, 1916–1925

Year	Estimated population as of July 1	Deaths	Death rate [1] per 100,000	Reported cases	Case rate [1] per 100,000
1916	2,282,690	0	0	178	7.8
1917 [2]	2,298,460	4	0.17	1,108	48.2
1918	2,314,230	15	.65	3,217	139.0
1919	2,330,000	13	.56	1,874	80.4
1920	2,345,770	11	.47	3,002	128.0
1921	2,361,539	10	.42	2,913	123.4
1922	2,377,308	2	.08	567	23.8
1923	2,393,077	3	.13	1,037	43.3
1924	2,408,846	8	.33	3,145	130.6
1925	2,424,616	([3])	----------	1,810	74.7
Total	----------	[4] 66	[5] 0.31	18,851	[6] 80.1

[1] Data are not available for computing rates for white and colored separately. The 1920 Federal census gave the population of the State as 1,885,993 white (80.7 per cent), and 451,758 colored (19.3 per cent). In 1910 the per cent of total for whites and colored, respectively, was 78.3 and 21.7.

[2] Admitted to the death registration area in 1917.

[3] Data not yet available.

[4] Nine years.

[5] Rate for 9-year period.

[6] Rate for 10-year period.

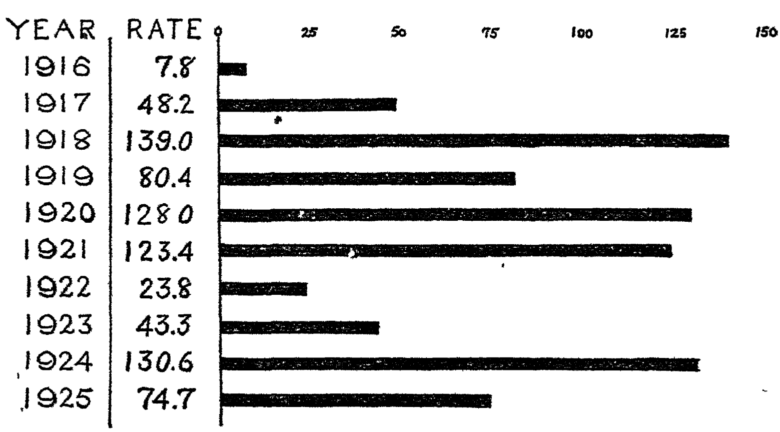
Incidence, 1920–1924.—Of 80 counties from which the data were obtainable, 67 reported 6,803 cases for the years 1920–1924, while 13 reported no cases. The largest number reported for any one county was 1,268; the median number reported was 27. Information was not obtainable in 11 counties, and for 4 no data are given.

Incidence in 1925.—Of 81 counties from which the information was obtained for 1925, 45 counties reported 969 cases of smallpox, the largest number for any one county being 200 cases, the median, 6 cases. Thirty-six counties reported no cases during the year.

Approximate number of vaccinations, 1920–1924.—In 73 of the counties for which information was available there were reported 110,932 vaccinations during the five years preceding the survey, the largest number for any one county being 15,000. The remaining 6 of these counties reported no vaccinations.

Cost of control measures, 1920–1924.—The total amount expended for medical service during the five-year period 1920–1924 for 38 of 50 counties for which information was available was given as $30,922.75, the largest expenditure for any one county being $7,600. The remaining 12 of these counties reported no expenses under this head.

SMALLPOX—TENNESSEE
Case Rate per 100,000



For special quarantine, 39 of 52 counties giving the information reported $13,399.18, the largest expenditure for any one county being $1,706. Thirteen of these counties reported no expenses under this heading. These expenditures are exclusive of the salaries of the health officers.

Difficulties met with in enforcement of vaccination.—The sentiment of county officials regarding compulsory vaccination as a condition for school attendance in the absence of an epidemic was fairly evenly divided. Lawsuits as a result of complusory vaccination were reported for three counties. Sectarian opposition to vaccination was said to exist in seven counties.

The following were among the difficulties most frequently met with by the health officers in the enforcement of vaccination:

1. Ignorance and exaggerated stories of bad results following vaccination.
2. Opposition aroused by enforcing quarantine regulations.
3. General opinion that the disease is mild and is less severe than the results of vaccination.
4. Lack of aggressive support by physicians.
5. Lack of support by officials of large industries.
6. Lack of financial aid by county officials.
7. Tendency and ability of certain classes to secrete the disease.
8. False conception of personal liberty
9. Opposition from certain religious sects.
10. Tendency of some local officials to suppress knowledge of outbreaks for commercial reasons.

RESULTS OF SURVEY

First-hand information was secured regarding the smallpox situation throughout Tennessee, the approximate number of immune persons, the cost of control measures, the sentiment of the county officials and the general population with regard to vaccination, and the difficulties most frequently encountered by health officers in the enforcement of vaccination regulations.

From an educational standpoint, the survey served to impress the gravity of the situation upon the local authorities and stimulated their interest. Although the expected increase in the incidence of smallpox over the previous year did not occur, had it occurred and had intensive control measures been necessary the educational work accomplished and the closer contact made between the State department and local health authorities would have greatly facilitated the enforcement of such measures.

CONCLUSIONS

Although the percentage of persons vaccinated in Tennessee is extremely low, it is believed that the State law empowering local boards to enact such vaccination measures as may be deemed necessary for the protection of the public is adequate for the time being. A State compulsory vaccination law, unenforceable in rural sections, might stir up such opposition as to hinder other health programs. By virtue of the present law, local officials have, in times of epidemics, enforced vaccination of contacts, of the inhabitants of a zone around the foci of infection, and of the school population with little or no opposition.

Greater reliance should, for the present, be placed on educational measures to secure more widespread vaccination. While the State health department should keep the local authorities informed and

make suitable recommendations from time to time. with a State the size of Tennessee the ultimate solution of this problem, as well as of many rural health problems, would seem to be in the extension of wholetime county health departments. Smallpox offers no serious problem to counties with such departments.

There seems to be a growing sentiment in the medical profession of the State, and especially among health officers, that quarantine measures are often ineffectual and that persons refusing vaccination on the grounds of restriction of personal liberty or otherwise should not be compelled to subject themselves to quarantine restriction. It is argued that such a course would emphasize the importance of vaccination and encourage its practice. Until, however, we can secure vaccination of all minors and irresponsible persons, until vaccination is an equal protection against the most severe as well as the milder forms of the disease, and until vaccination becomes an absolutely reliable procedure, with the use in every case of a vaccine of unquestionable potency and the most approved technique followed by a careful reading and an accurate interpretation of the result, the elimination of the strictest possible quarantine is inadvisable.

BENZOL POISONING AS AN INDUSTRIAL HAZARD

Review of Studies Conducted In Cooperation with the Subcommittee on Benzol of the Committee on Industrial Poisoning of the National Safety Council

By LEONARD GREENBURG, Associate Sanitary Engineer, Office of Industrial Hygiene and Sanitation, United States Public Health Service

VI. INTENSIVE STUDY OF SELECTED INDUSTRIES WITH RESPECT TO FACTORY CONDITIONS AND POLLUTION OF THE ATMOSPHERE BY BENZOL

A somewhat intensive study was made of a group of selected industries in which benzol was used, with a view to determining (*a*) the amount of benzol used and the precautions adopted in handling it, particularly the method of ventilation in force; (*b*) the resulting concentration of benzol in the atmosphere; and (*c*) the condition of the exposed workers as revealed by symptomatology and blood counts. The first of these studies were conducted during the summer of 1924, Mr. Dexter making the inspections and Doctor Shirley the clinical examinations. A second investigation was made during the winter of 1924–25, the writer making the inspections, and Doctor Shirley, Doctor Batchelor, and Doctor Herrman making the clinical examinations. The chemical tests were worked out and applied by the writer.

The first questionnaire as noted above gave a preliminary list of 84 firms using benzol. Later inquiries expanded this list to 104 organizations representing 125 different plants. Of these 125 plants our investigators actually visited 94, the remainder being omitted either because they were situated at too great a distance or because from what we could ascertain by correspondence they did not promise to prove useful for our purposes. Of the 94 plants visited, we were permitted to inspect 78, and from these 78 we ultimately selected 17 as suitable for intensive study. Five of these were later eliminated from consideration for various reaons, leaving 12 plants in which there was exposure of several or more workers to benzol vapors under conditions which might reasonably be expected to constitute a possible hazard: and in 18 different workrooms of these 12 plants detailed chemical and medical studies were made.

In each case the first step was to make a careful survey of existing conditions, using the inspection form reproduced below:

No.---------

FIELD INVESTIGATION—BENZOL STUDY

1. City------------------------- Establishment------------------------ Date--------------
Type of building------------ Room-------------------------------- Location----------
Size------------------------ Crowded------------------------------ Ample------------
2. Ventilation
Natural---
Artificial---
3. Fumes and gases noticeable---
4 Specific poisons Benzol How long used----------------- Amount used------------------
How received------------------- How stored------------- How distributed------------
Nature and description of use in the particular process--------------------------------
----

Type of container used--
Number-----Size------(Make sketch) Open-----Covered------Portable-------Fixed------

What precautions are taken while cleaning tanks or receptacles?
What other solvents used?
Is room separated from other processes of manufacture?

Air Test for Benzol

Test No (1)	Tube No (2)	Date (3)	Weight of tube		Gain in weight (mgs) (6)
			Start (4)	Finish (5)	

Vol of air sample (liters) (7)	Mg /liter (8) (6−7)	P p M benzol (9) (8×313)	Temp (10)		R H (11)	Test point (12)
			Dry	Wet		

5 Employees

Occupation	Work, day or piece	Exposed to hazard		Hours per day	Rest period	Medical examination
		Male	Female			

6 Fatigue

7 Remarks

It will be observed that under heading No. 1 certain fundamental structural data are listed. Heading 2 deals with the ventilation in use. Headings 3 and 4 deal with the fumes and vapors in the atmosphere and the shop conditions, which serve to bring about the presence of such vapors. The air sampling data were recorded under item 4 also.

Under heading 5 are grouped certain data which yield a rather general job analysis. Heading 6 provides for notes on fatigue, the purpose being an attempt to clarify the relation between heavy or light labor and the incidence of benzol poisoning. And, lastly, item 7 is for any remarks considered of value to the investigator and not provided for elsewhere In addition to filling out this form, the investigator prepared a series of notes on each of the plants studied, in greater detail than the form permits, and covering all those factors which may have had a bearing on the problem in hand.

In spite of the fact that benzol vapors have for a long time been associated with serious cases of acute and chronic poisoning, one finds on searching the literature of this subject that only a very small amount of work has been done on the actual concentrations of benzol vapor in plant atmospheres.

Harbeck and Lunge (102) showed that it was possible to recover benzol vapor quantitatively from air by absorption in a mixture of concentrated sulphuric and fuming nitric acids The benzol is, in this case, converted over to dinitrobenzol and is determined as such. Lehmann (103) tested this method with weighed quantities of benzol and obtained a recovery of 92 to 95 per cent. He also used this method with certain paraffin oil modifications and obtained yields of 94.4 to 100 per cent.

Using the method of nitrification for benzol determinations, Lehmann (3) found that 0.015 gram per liter (4,700 parts per million) produces listlessness and confusion after half an hour, and that 0.02 to 0 03 gram (6,260 to 9,390 parts per million) for a few hours may cause loss of consciousness. In this same contribution Lehman (3) quotes some of the earliest, if not the earliest, figures for the benzol concentration in factory air. He utilized the method of converting the benzol to dinitrobenzol as described earlier and found 0.080 to 0.094 milligram per liter (25 to 29 parts per million) in the air of a benzol washing plant, 0.11 to 0.16 milligram per liter (34 to 50 parts per million) in the air of a distillation plant, 0.19 to 0.34 milligram per liter (59 to 106 parts per million) at various stations in two benzol plants.

Albaugh (32) quotes the limits of toxicity of benzine, benzol, and turpentine as follows:

Benzine (naphtha, gasoline, petroleum benzine):
- 0.02 gram per liter (6,260 parts per million) causes local symptoms.
- 0.05 gram per liter (15,650 parts per million) is poisonous.

Benzol:

0 015 gram per liter (4,695 parts per million) is poisonous

0 042 gram per liter (13,146 parts per million) will kill dogs in 20 minutes.

Turpentine

0 003 gram per liter (919 parts per million) causes local symptoms.

0 006 gram per liter (1,878 parts per million) will poison healthy men in 1 to 4 hours

Albaugh does not cite the methods used for the determination of benzol or the source of these data.

Major Elliot and Captain Dalton (104), in studying the problem of the concentration of acetone, alcohol, and benzene in air, rejected the method based on nitration of the benzol with subsequent reduction, diazotisation, and combination with α naphthol to form a dye. This method was considered to be more complicated than Pfeiffer's method (105), and for this reason Pfeiffer's method was adopted Elliot and Dalton passed the air through 15 cubic centimeters of a mixture of equal volumes of fuming nitric acid and strong sulphuric acids. By further chemical procedures, dinitrobenzol was recovered and dissolved in alcohol, which was then heated with a solution of stannous chloride and the excess titrated with N/10 iodine, using starch as an indicator. They found a minimum of 0 01, an average of 0 26 and a maximum of 0.90 gram of benzene per million cubic centimeters of factory air. These figures, when converted, yield 3.1, 81.5, and 281 parts per million, respectively.

According to Hamilton (53), Pugliese (61) tested the air of the Milan raincoat factory in which three girl workers died from benzol poisoning one winter, and found that the air contained 1,000 parts of benzol per million. The method for the determination of benzol is not given. This quantity would, according to our experience, probably yield cases of benzol poisoning. Pugliese feels that by allowing sufficient space for each worker and ample ventilation, benzol poisoning should be easily avoided. He considered the conditions at the Pirelli works satisfactory, where each worker had over 1,500 cubic feet of space and over 1,600 cubic feet of forced air supply per minute.

Doctor Legge (54) cites the results of benzol determination made in the atmosphere of a balloon fabric spreading room. In this case the quantity of benzol vapor in the air ranged from 210 parts per million in the middle of a corridor opposite a machine to 1,050 parts per million in front of a fan between two spreading machines at work. In the pneumatic-tire manufacturing room analyses showed 2,800 parts per million with the windows open, whereas with the exhaust fan in operation a sample taken 18 inches from the work showed 800 parts per million. The method used for the determination of the benzol vapors is not given.

One of the most complete papers dealing with the determination of benzol with which the present investigators are familiar is that of Tausz (106). The work of this investigation, carried on purely from the point of view of the chemical determination of benzol in coke oven and illuminating gas, is valuable because of the very extensive review of methods for the determination of benzol presented therein. Practically every suggested method for the determination of benzol is reviewed in this paper and the author concludes that the method of activated charcoal is superior to all others. Using less than 1 cubic centimeter of benzol the author was able to obtain a yield of from 91 to 93 per cent, and this in a relatively short time and by simple analytical procedures.

In considering the methods for the determination of the benzol content of factory air the present investigation took into consideration all of the available literature, bearing in mind the fact that the method to be employed must be simple, the apparatus portable, and the analyses must be made in a comparatively short time. It was concluded that the activated charcoal procedure was the method of choice for the problem at hand. It is true that silica gel might have served the purpose; but with this substance it is necessary to use such precautions against the absorption of water vapor that it was decided not to use it Before finally selecting the charcoal method, its accuracy was determined by vaporizing a weighed quantity of benzol and determining the increase in weight of the tube of activated charcoal. In these experiments there was recovered an average of 92 per cent of the benzol introduced into the gas chain when sampling was conducted at the rate of 1 liter per minute. This means that the observed results are to be considered as approximately 8 to 10 per cent lower than the actual existing conditions. A difference of this amount is, however, not significant from the standpoint of this investigation. It is not a matter of whether there are 90 or 100 parts per million of benzol vapor in the air, but rather whether there are 50, 100, 200, 300, 500, 1,000, etc., parts per million present. When one bears in mind the fact that, under plant conditions, particularly in the summer season when windows are open and natural ventilation is good, the benzol vapor concentration in the workroom is subject to great and almost continuous variations, errors of 10 per cent are obviously of no serious significance.

Since activated charcoal also absorbs a certain amount of moisture, it was necessary to take suitable precautions to render the sampled air moisture-free before passing it into the charcoal absorption tube. The finished apparatus (shown in fig. 1) consisted of a carrying case, 14 by 15 by 15 inches, provided with a series of clamps for holding three tubes, the first two of which were 10 inches by 1 inch

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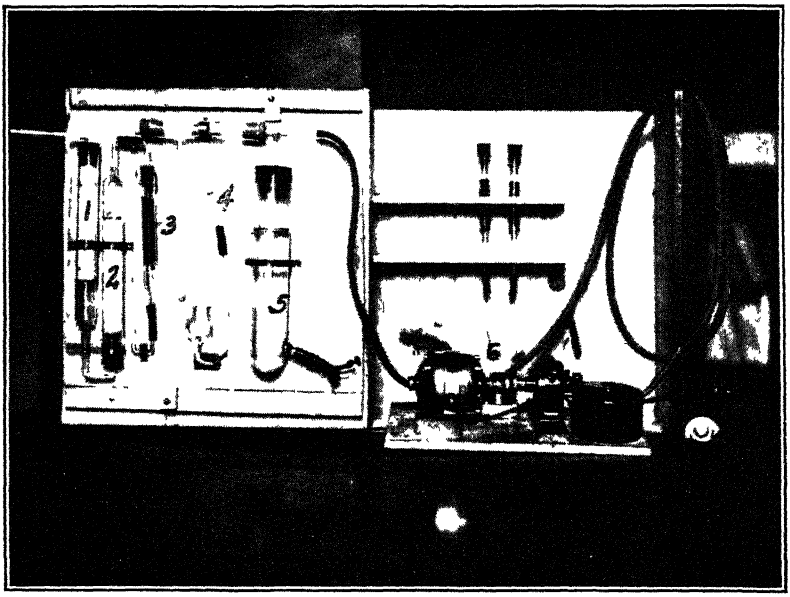

Fig 1 —Apparatus for sampling vapors in the air 1, Soda lime tube, 2, calcium chloride tube, 3, activated charcoal tube, 4, flow meter, 5, pressure regulator, 6, motor blower unit

and the last $6\frac{1}{2}$ inches by $\frac{5}{8}$ inch. The first tube was filled with soda lime for absorption of acid vapors, the second with calcium chloride for absorption of the water vapor, and the last tube with approximately 7 grams of 8 to 14 mesh activated charcoal.

Before filling the absorption tubes, the charcoal was dried over night in a constant temperature oven at 105° C. and kept in a tightly stoppered glass bottle. It was found advantageous to cover the retainer plate of the charcoal tubes with a piece of fine mesh copper gauze, which served to prevent any large grains of charcoal from falling through the plate. The tubes were then clamped in position beneath the stem of a small funnel, and the lower end of the tube was connected to a large bottle (7 liters capacity) by means of a piece of rubber tubing. The charcoal was then dropped, by means of a spatula, into the small funnel, from which it fell into the tube. After filling the tube in this manner, the stopcock between the tube and suction bottle was opened and closed several times. This procedure serves to remove the fines from charcoal tubes, which were never "tapped" during the process of filling. The foregoing method is the standard procedure recommended by the United States Bureau of Mines for the preparation of activated charcoal gas absorption tubes.

It was also found necessary to equilibrate the charcoal tubes before use This process consisted in connecting six charcoal tubes in parallel by means of a manifold made of glass tubing and connecting the manifold to the outlet side of the calcium-chloride tube. A tube of cotton wool was also added in the air chain in front of the soda-lime tube. Compressed air was then passed through the chain, which was composed of the following elements: Cotton-wool tube, soda-lime tube, calcium-chloride tube, manifold, and six charcoal tubes. The compressed air, at the rate of approximately 6 liters per minute, was allowed to flow through the chain of one and one-half to three hours, and on the completion of this step the charcoal tubes were desiccated over calcium chloride and later weighed. After the tubes were equilibrated in this manner it was found that the aspiration of ordinary room air through the sampling chain failed to produce any significant change in the weight of the charcoal tubes. Prior to going into the field, a sufficient number of charcoal tubes were prepared in the previously described method and placed in the rack of the carrying case provided for this purpose. At the selected point of the workroom the sampling apparatus was set up and the outlet end of the absorption tube connected to a 7-liter aspirator bottle, previously filled with water, which, when allowed to flow from the aspirator bottle, drew air through the gas chain. After a sufficient volume of air had been sampled, usually 20 liters, the charcoal tube was removed from the chain, stoppered at the top,

plugged at the bottom, and returned to the rack. On returning from the field the tubes were dusted with a camel's-hair brush, desiccated, and weighed, the increase in weight being taken to represent the approximate amount of solvent vapors in the atmosphere sampled. In those plants using benzol as the only solvent, this increase in weight represents that due to benzol vapors only.

It must be emphasized, however, that the method of analysis used is not specific for benzol, since the charcoal absorbs not only this substance but other solvent vapors as well. In the accompanying tables it is indicated whether other solvent vapors were present or not, and it will be noted that they were present in nine of the workrooms. In these instances, then, the figures for atmospheric pollution include all solvent vapors and not merely benzol, but since these tests were made chiefly as an index of the protection against atmospheric pollution by the ventilation equipment present, the results are believed to serve the purpose in a sufficiently satisfactory degree.

The general results of these studies on the extent of atmospheric pollution in workroom air are presented in Table 4. They cover 18 different workrooms which are fairly representative of the various processes in which benzol is used in the rubber, patent leather, and artificial-leather industries, in wire insulating, dry cleaning, and sanitary-can manufacture. Of the 18 workrooms, 9 were provided with no artificial ventilation, 4 were equipped with local exhaust ventilation, 2 with general room ventilation, 1 with both local exhaust and general ventilation, and 2 with what amounted practically to an inclosed process. In two instances (room 27A and room 75B) but one determination was made in each workroom in summer. The other summer averages are generally based on two or three determinations. Summer records in room 75A and in plants 83 and 150, as well as all the winter records, are based on the average of 10 to 20 determinations.

It has been pointed out above that the absorption method used in this investigation for the determination of benzol fails to distinguish between benzol and other solvent vapors, such as alcohol, methyl acetone, ethyl acetate, and the like. For the purpose of studying the efficiency of ventilation, however, the total concentration of solvent vapors is entirely satisfactory, and it is indicated in the table whether such other vapors were present in addition to benzol. The figures for solvent vapors are, however, all computed in terms of benzol.

TABLE 4.—*General summary of results*

Room No.	Process	Ventilation [1]	Gallons of benzol used per week	Concentration of solvent vapors (parts per million): Summer, Average	Summer, Maximum	Summer, Minimum	Winter, Average	Winter, Maximum	Winter, Minimum	Solvent vapors other than benzol present	Blood findings: Number of persons examined	Blood findings: Number positive
23	Core painting	O	4,200	220	340	110	------	------	------	------	6	2
27A	Cement mixing	O	200	110	110	110	------	------	------	+	2	1
27B	Slickening	G	200	700	890	500	------	------	------	+	2	0
50A	Coating	L	2,500	------	------	------	500	1,020	180	+	4	1
50B	Mixing	E	2,500	------	------	------	430	430	410	+	3	1
59	Tire making	O	250	150	160	140	210	340	50	------	9	1
60	Cement mixing	O	60	150	190	100	------	------	------	+	1	0
61A	Insulating wire	O	300	130	210	50	210	460	40	+	12	6
61B	Compound mixing	O	300	1,360	2,040	80	580	880	220	+	1	1
75A	Coating	GL	4,200	130	410	30	330	480	1[illegible]0	+	10	1
75B	Compound mixing	E	4,200	100	100	100	------	------	------	+	3	1
78A	Lining	L	750	70	110	50	90	350	0	------	0	0
78B	Compound mixing	O	750	340	390	280	------	------	------	------	1	0
83	Cement mixing	O	10,000	620	860	310	------	------	------	------	9	6
91	Lining	L	450	180	560	20	400	500	280	------	5	0
95	Dry cleaning	G	500	1,800	4,140	230	------	------	------	------	3	2
150A	Coating	L	1,000	90	130	40	------	------	------	------	1	1
150B	Cementing	O	50	100	120	60	------	------	------	------	9	2

[1] O=none, G=general room ventilation, L=local exhaust ventilation, E=inclosed process. Examinations were made of as many workers as possible. Air samples represent conditions of the general room air and of the air at the station of the worker. All samples were taken at the breathing level.

It will be noted that a wide variation in concentration of solvent vapors was observed, ranging from 0 to 4,140 parts of benzol per million parts of air. In six instances comparable data for winter and summer conditions were secured. In rooms 59, 61A, 75A, 78A, and 91 the winter figures are from 25 to 100 per cent higher than those obtained in summer, as one might naturally expect from the effect of decreased ventilation. In the case of room 61B the summer figures are higher than the winter figures because a hot mixing process, which was going on when the summer samples were taken, had been abandoned in the winter.

A better idea of the significance of the results may be obtained by reference to Table 5, in which the average results of the air analyses are grouped according to the amount of solvent used and the character of the ventilation devices installed.

TABLE 5.—*Atmospheric concentration of solvent vapors in relation to amount of solvent used and ventilation procedures*

Group	Workroom	Gallons of benzol used per week	Ventilation	Average solvent vapors in air (p. p. m.)	
				Summer	Winter
I Small amount of benzol used; no local ventilation.	150B	50	None	100	
	60	60	None	150	
	27A	200	None	110	
	27B	200	General	700	
	59	250	None	150	210
	61A	300	None	130	210
	61B	300	None	1,360	580
II Large amount of benzol used, local ventilation.	91	450	Local	180	400
	78A	750	Local	70	90
	150A	1,000	Local	90	
	50A	2,500	Local		500
	50B	2,500	Inclosed		430
	75B	4,200	Inclosed	100	
	75A	4,200	General and local	130	330
III Large amount of benzol used, no local ventilation.	95	500	General	1,800	
	78B	750	None	340	
	23	4,200	None	220	
	83	10,000	None	620	

Group I includes seven workrooms, each using 300 gallons of benzol a week or less—one, 27B, provided with a system of general ventilation, the remainder with no artificial ventilation. In spite of the small amount of solvent used, the concentration of benzol vapors in the air was very high in the case of room 27B. Slickering of hides was the process carried out in this room, and the ventilation consisted only of general exhaust fans without hoods. This result (coupled with the data for room 95) confirms the opinion that this type of ventilation is distinctly unreliable. In the other six workrooms of this group there was no provision for artificial ventilation. In spite of this fact the benzol concentration in the air of five of the rooms (150B, 60, 27A, 59, and 61A) was fairly low in summer; but of those examined in winter (59 and 61A), both showed over 200 parts per million of solvent vapors. In rooms 60, 27A, and 61B the operation was a mixing process in which the extent of atmospheric contamination would naturally be less than in the case of cementing (150B), tire making (59), and insulating wire (61A). All that can be deduced from these figures is that, while the use of small amounts of benzol without ventilation may happen often to be associated with low benzol concentration in the air, such processes, even when confined to mixing, may at other times, particularly in winter, show marked atmospheric contamination.

Group II is of particular interest. Here are seven workrooms using from 450 to 4,200 gallons of benzol per week, all provided with systems of local ventilation (or, in the case of rooms 50B and 75B, with what were practically inclosed processes). Room 91 (in a sanitary-can plant) showed high benzol figures even in summer. This room had a good local exhaust from the ovens, but the temperature of the ovens was too low for the speed at which the can ends

passed through, so that the warm metal still gave off much benzol vapor after it emerged. These hot can ends were permitted to accumulate in large numbers in the room, and largely to this cause is attributed the high benzol concentration noted in the air Room 75A was fairly low in benzol content in summer (130 parts per million), but high in winter (330 parts per million). This is a coating room with an exhaust ventilation system which our observer reported to be improperly arranged and in which the air was subject to additional pollution from the coated cloth which was allowed to cool in the room after passage through a hot chamber Rooms 50A and 50B were examined only in winter and showed high benzol contents (500 and 430 parts per million). In room 50A, four machines for coating artificial-leather were provided with exhausts, while a fifth was not. In room 50B benzol was used in supposedly inclosed mixers, but maintenance was poor and much solvent was allowed to evaporate from open receptacles. Room 150A was a rubber coating room with local ventilation, but so operated as to threaten considerable atmospheric contamination; and room 75B was a mixing room in an artificial-leather factory. Both showed low benzol concentrations in summer but, unfortunately, they were not studied in winter. Finally, room 78A was a lining room in a sanitary-can factory with excellent local exhaust ventilation, in which summer analyses gave an average of 70 parts per million of benzol, and winter analyses (18 in number) an average of 90 parts per million. These last three plants, and particularly 78A, show what excellent results may occasionally be accomplished by local ventilation in the use of benzol.

Finally, group III consists of four plants using 500 to 10,000 gallons of benzol a week without local ventilation. Room 95, a dry-cleaning room, with general ventilation only, showed the highest average (1,800 parts per million) and the highest maximum (4,140 parts per million) benzol content revealed in the entire study. In all the other three cases the atmospheric contamination was also high, even though two of the rooms (78B and 83) were used only for mixing processes.

In general, it may be concluded from these studies of workroom air that rooms in which benzol is evaporated into the air without local exhaust ventilation will, in most cases, show high concentration of the fumes in the air of the rooms Where the amount of benzol used was small, this was sometimes not apparent in our analyses (rooms 150B, 60, and 27A); but in room 60 only two analyses were made and in 27A only one analysis was made. Mixing processes were carried on in both rooms.

With ideal local exhaust ventilation, on the other hand, even large quantities of benzol can be used without heavy atmospheric contamination (78A, lining; 150A, coating; and 75B, mixing).

VII. RESULTS OF MEDICAL EXAMINATION AND CLINICAL TESTS MADE TO DISCOVER EARLY SIGNS OF BENZOL POISONING IN EXPOSED WORKERS

The examination of workers exposed to various concentrations of benzol in the atmosphere with a view to the determination of the extent of the existing hazard, is the crucial part of the investigation.

It is obvious that the symptoms of chronic benzol poisoning are such as to be frequently overlooked in the absence of careful and systematic medical examinations and the 98 cases of poisoning reported by the industries studied must greatly understate the case. Fortunately we have in the blood picture an excellent test for the detection of poisoning in its very early stages, and chief stress has been laid upon this point in our studies. Altogether it was found possible to make blood tests on 81 different individuals exposed to the influence of benzol in the 18 workrooms studied.

Wherever possible, general physical examinations were also made and medical histories obtained of the workers in question; but in many instances this could not be done. For recording the data obtained in the history and physical examination, the form reproduced below was used. It will be observed that certain plant and occupational data are first called for, followed by a list of the symptoms most commonly found to be of significance in the patient's history. The reverse side of the card was used for the findings of the medical examiner, laboratory notes, and personal and family data. This card was found to be very well suited to the purpose in hand.

Name.......... Plant..........	No..........
Industry..........	Occupation..........
Duration in industry..........	Previous occupation..........
Substances used..........	....
Chief complaint..........	....
Onset.	
Anorexia..........	Pallor..........
Nausea..........	Cyanosis..........
Vomiting..........	Dyspnea..........
Distress (p. c.)..........	Hemorrhages (note place)..........
Burning..........	....
Pain..........	Menstrual disturbances..........
Constipation..........	Nose and throat..........
Diarrhea..........	Eye..........
Lose weight..........	Numbness..........
Headache..........	Tingling extremities..........
Dizziness..........	Paronychia..........
Fainting..........	Chills..........
Muscle weakness..........	Fever..........
Paresthesis..........	Chilly sensations..........
Paralysis..........	Skin eruptions..........
Changes of disposition..........	Frequency of urination..........
Irritability..........	Nocturia..........
Forgetfulness..........	Bloody urine..........
Lack of concentration..........	Infections..........
Remarks..........	

[Reverse side of card]

Findings
  Pallor ....
  Nose and throat ....
  Eye ....
  Respiratory ....
  G.-I. ....
  Neuro-muscular ....
  G.-U. ....
  Skin condition ....
  Petechiæ ....
  Hemorrhage ....
Laboratory notes
  Hgb. .... White count .... Red count ....
  Differential .... Poly .... Lymph .... L Mono .... E .... B ....
  Urine ....
  Blood pressure ....
Type of individual
  Ruddy .... Pale ....
  Fair .... Dark ....
  Well nourished .... Not ....
Family history of blood diseases, i. e.
  Hemophilia .... Anemia .... Purpura ....
  Alcohol ....
  Previous illnesses ....
  Lues ....
  Marital ....
Impression
  ....

As pointed out in the foregoing pages of this report, the change in the white blood cell count is by far the most important early sign of benzol poisoning. Normally, in health, the white blood cell count varies between 7,500 and 9,000 per cubic millimeter. As a lower limit in health, the figure 7,500 may be taken. In chronic benzol poisoning the count is reduced often much below this point and may reach an exceedingly low figure. In one case in the present investigation, in which the man remained at work, and his count was obtained while the usual routine study was being made, the white blood cell count was depressed to below 2,000. In attempting to fix on some definite standard for the white cell count which would, along with a history of exposure, be indicative of benzol poisoning, we decided that a fall of 25 per cent below the lower limit of the normal count of 7,500 (i. e., to 5,625) might be accepted as reasonably clear evidence of the condition in question. The interpretation of the blood picture was, however, not based solely on the total white cell count. Chronic benzol poisoning produces also a marked change in the relationship between the various types of white blood cells present. Ordinarily the polymorphonuclear white cells comprise between 65 and 70 per cent of all of the white blood cells, whereas the lymphocytes comprise but 20 to 30 per cent. In benzol poisoning the percentage of lymphocytes is relatively increased and that of the

polymorphonuclear leucocytes is markedly decreased. In making a diagnosis of benzol poisoning these aspects of the differential count were carefully considered.

This study had for its primary aim the correlation of the quantity of benzol vapor in the air with the clinical findings produced by the inhalation of this quantity of benzol That such a correlation as this is not easily obtained was proved early in the course of the study. The quantity of benzol used in any plant may vary between very wide limits at different seasons of the year, and, moreover, in any given establishment the winter and summer concentrations of benzol may be, and, in most cases, are, widely different. An attempt was made, however, to overcome this condition by sampling the room air both in the winter and summer season wherever this was possible. The duration of exposure, too, has its obvious bearing on the problem; and in this connection it is advisable to reiterate that a marked variation in personal susceptibility to benzol poisoning exists. It was found, for example, that of many persons employed for equal periods of time in a plant using benzol, only a few will be found clearly positive; while in other plants the persons who are positive for benzol poisoning may have worked in the industry for a shorter period of time than those who are negative.

In the summer of 1924 blood tests were made on 84 different workers, but 56 of these operatives while in plants using benzol were not exposed to a degree which would lead one to expect anything but the negative results actually obtained. These 56 tests have, therefore, been excluded from further consideration, leaving 28 tests made on exposed workers during this period. In the winter of 1924-25, 53 more such tests were made, giving a total of 81 in all.

In Table 6 is presented a summary of these findings for the 18 workrooms studied, arranged in groups according to the amount of benzol used, the ventilation equipment, and the analytical results obtained.

TABLE 6.—*Summary of blood findings on examination of workers potentially exposed to benzol*

Group	Room	Local ventilation	Average benzol in air, parts per million		Blood findings	
			Summer	Winter	Number of persons examined	Number positive
I-A						
Small amount of benzol, no local ventilation; low benzol content in air.	150B	—	100	----------	9	2
	60	—	130	----------	1	0
	27A	—	110	----------	2	1
I-B						
Small amount of benzol; no local ventilation, high benzol content in air	27B	—	700	----------	2	0
	59	—	150	210	9	1
	61A	—	130	210	12	6
	61B	—	1,360	530	1	1

TABLE 6.—*Summary of blood findings on examination of workers potentially exposed to benzol*—Continued

Group	Room	Local ventilation	Average benzol in air, parts per million		Blood findings	
			Summer	Winter	Number of persons examined	Number positive
II-A						
Large amount of benzol, local ventilation, low benzol content in air	78A	+	70	90	0	----------
	150A	+	90	----------	1	1
	75B	+	100	----------	3	1
II-B						
Large amount of benzol, local ventilation, high benzol content in air	91	+	180	400	5	[a] 0
	50B	+	----------	430	3	1
	50A	+	----------	500	4	1
	75A	+	130	330	10	1
III						
Large amount of benzol, no local ventilation, high benzol content in air	78B	−	340	----------	1	0
	23	−	----------	----------	6	2
	83	−	620	----------	9	6
	95	−	1,800	----------	3	2
Total	----------	----------	----------	----------	81	26

[a] 3 clinical cases, 1 fatal, since tests were made

In making a presumptive diagnosis on the basis of the blood examinations only those cases were considered positive which showed less than 5,500 white cells per cubic millimeter (as compared with a normal count of 7,500 to 9,000), except in a single instance (room 150B), where a female cement worker with a border-line white-cell count of 5,800 was considered positive because of an exceedingly low red-cell count (2,800,000 red cells per cubic millimeter, hemoglobin 49 per cent of normal). Many other individuals examined showed white-cell counts between 5,500 and 6,000, which would ordinarily be considered as suspicious, but were omitted and only the clearly outstanding cases were considered positive.

From Table 7 it will be seen that 10 out of the 26 cases considered positive had a white-cell count below 4,000. The red-cell count we find less strikingly reduced than the white-cell count, only 10 of the cases being below 4,000,000. This is, of course, to be expected, since the red-cell count is usually affected considerably later than the white-cell count in the development of chronic benzol poisoning. In the early stages of this disease an abnormal stimulation of red-cell production may, indeed, sometimes be noted.

More detailed data in regard to the blood picture of 13 of the cases considered as characteristic of early benzol poisoning are presented in Table 8, which indicates the constant reduction of total white cells, the relatively increased proportion of lymphocytes, the reduction in hemoglobin, and the common, but not universal, reduction in red cell count.

Figures for normal male and female blood counts are cited for comparison.

TABLE 7.—*Distribution of blood counts in 25 individuals considered as presumptive cases of benzol poisoning*

	Number of cases		Number of cases
White cell counts		Red cell counts	
Under 2,000	1	Under 1 000,000	1
2,000 to 3,000	2	1,000,000 to 2,000,000	3
3,000 to 4,000	7	2,000,000 to 3,000,000	1
4,000 to 5,000	7	3,000,000 to 4,000,000	5
5,000 to 6,000	9	4,000,000 to 5,000,000	10
		5,000,000 to 6,000,000	6

TABLE 8.—*Detailed blood counts on 13 workers exhibiting the picture of early benzol poisoning*

Plant code No	Hb	R. B. C.	W. B. C	Poly	Lymphocytes	Large mononuclears	Eosin.	Trans
				Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*
23	65	4,376,000	5,300	58	36	3 5	1 5	0 5
23	75	4,400,000	5,200	55	39	3 5	2 0	0 5
23			4,100					
23			4,800					
27	35	4,304,000	4,667	55	36	5 0	1 0	2.0
59	70	5,424,000	6,140	47	47	3 5	0 5	1 0
61	85		4,150					
61	50		4,000					
	40	1,736,000	3,600					
61	75		2,850					
	80	1,736,000	4,200					
61	23	800,000	3,000					
83	27	1,055,000	1,450	58	36	5 0	1 0	0 0
	41							
	30	2,100,000	2,100					
	29	1,365,000	2,200	44	49	6 0	1 0	0 0
95	55	3,193,000	3,100	50	39	1 5	7 0	1 5
95	70	4,968,000	3,600	47	41	0 5	8 0	3.0
Normal male	90-110	5,000,000 - 5,500,000	7,500	65-70	30	1-2	1-2	2-4
Normal female	50-100	4,500,000 - 5,000,000	7,500	65-70	30	1-2	1-2	2-4

It may be of some interest to present in some detail one or two cases of benzol poisoning which have come to our attention during the course of this study.

Case S. C.: A tire builder in a rubber-tire factory. Entered hospital May 20, 1924, with a complaint of weakness, dizziness, slight cough with shortness of breath, and palpitation. During three weeks prior to hospital entry, patient developed bleeding gums and severe nosebleeding. "Loss of ambition" and "sleepiness" were also stressed by the patient. Physical examination revealed pallor, pale gums with gingivitis, and fading brownish purpuric spots on thighs; the essential findings on study of this case were as follows:

Blood studies showed Hb., 30 per cent, R. B. C., 1,200,000; color index, 1.2; W. B. C., 1,800; platelets, 45,000.

Blood smear: Size and shape of red cells markedly uniform and regular for such a severe anemia A few fragmented cells and a rare poikilocyte is seen. Slight polychromatophilia.

Gastric analysis, test meal. Total acidity, 56 per cent; free HCl, 26. A diagnosis of aplastic anemia, due to chronic benzol poisoning, was made.

Patient remained in hospital for five weeks. Had slight bleeding from gums after admission Received two blood transfusions with marked symptomatic improvement. Discharged June 25, 1924, condition improved; to return for later transfusion. Blood count at discharge showed R. B. C. 2,280,000, Hb 45 per cent, W. B C, 1,800.

Case J. C. A worker in a wire-insulating establishment; entered the hospital on May 18, 1924, complaining of progressive weakness for the past three months, with severe nosebleed, gastric disturbances, dyspnea, palpitation. Increasing pallor and yellowness of skin were observed by the patient. Neurological symptoms were lacking. A similar although milder attack was suffered by the patient about four years earlier while he was employed in the same factory.

Physical examination revealed only the presence of a distinct lemon yellow colored skin and hyperactive reflexes. The blood examination disclosed a negative Wassermann reaction. A diagnosis of chronic aplastic anemia, due to chronic benzol poisoning, was made. The chronological history of this patient's blood follows:

Date	R B C	Hb	W B C	Polys	Lymph	Remarks
		Per cent				
Mar 21, 1924	680,000	25	1,100	40	55	
Mar 22, 1924	1,120,000	25				1½ hours post transfusion
Apr. 3, 1924	1,296,000	35	1,150			
Apr 5, 1924	1,520,000	40	1,350			20 hours post transfusion
May 2, 1924	1,600,000	30	1,600	32	60	
May 7, 1924	1,760,000	40	1,400	60	39	Post transfusion
May 17, 1924	2,112,000	40	1,800	47	49	

The patient was discharged after spending 57 days in the hospital and was ordered to remain away from the benzol atmosphere and to return to the clinic from time to time for examination.

It was found possible to obtain detailed clinical histories for only 9 out of the 26 individuals showing a blood picture characteristic of early benzol poisoning. The results are presented in Table 9.

TABLE 9.—*Symptomatology and physical findings on nine cases of early benzol poisoning*

Findings	Case 1	2	3	4	5	6	7	8	9	Total
Loss of appetite								+	+	2
Gastric disturbance								+		1
Constipation	+									1
Headache				+					+	2
Dizziness	+			+	+				+	4
Nosebleed								+		1
Pallor	+	+			+	+	+		+	6
Spongy gums					+				+	2
Poor nutrition					+					1

Pallor and dizziness were the most common symptoms, and five of the nine cases showed groups of symptoms which, on a careful medical inquiry, might have aroused suspicion of poisoning (case 1—constipation, dizziness, pallor, case 4—headache, dizziness, case 5—dizziness, pallor, spongy gums, poor nutrition, case 8—loss of appetite, gastric disturbance, nosebleed, case 9—loss of appetite, headache, dizziness, pallor, spongy gums). In general, however, the chief result of the examination of this small group of cases is to indicate that benzol poisoning may proceed for a considerable length of time and may produce marked changes in the blood-cell count of the patient without leading to any symptoms obvious enough to indicate to the patient that anything is wrong. Yet the relation discussed in a preceding section between low blood counts and susceptibility to microbic infection clearly indicates how serious such a condition may be.

Considering, then, the most important index of early benzol poisoning—reduction in the white-cell count—the results obtained (as indicated in Table 6) are distinctly disconcerting. In Group IA, which includes plants using small amounts of benzol and showing reasonably low concentrations of benzol in the air in summer, although lacking any provision for local exhaust ventilation, 3 out of 12 men examined showed the blood picture of chronic benzol poisoning. In Group IB, which includes rooms with small amounts of benzol in use, but without local exhaust ventilation, and showing high benzol concentration in the air, 8 out of 24 men examined gave positive results.

In Group IIB, with large amounts of benzol in use, and with local ventilation systems proved inefficient by high analytical results, 3 men out of 22 gave a blood picture characteristic of benzol poisoning; while in Group III, where large amounts of benzol were used without exhaust ventilation and with high contamination of the air, 10 out of 19 workers gave positive results.

There remains for special consideration Group IIA, which should furnish the crucial test of the benzol hazard under the most favorable possible conditions. Here large amounts of benzol were used, but with local exhaust systems so efficient that our records show averages of 105 parts per million or less. It is most unfortunate that we were unable, after repeated efforts, to secure permission to make blood examinations in room 78A (a sanitary can factory). In room 150A (a coating room) there was only one worker exposed to the fumes. He was positive, with a white count which fell progressively from 9,300 in October, 1924, to 5,500 in May, 1925, and to 4,700 in July, 1925. His red count remained over 4,000.000. In room 75B three men were exposed to benzol fumes (only 105 parts per million

of benzol in the air, as a result of excellent exhaust ventilation); but one of the three proved positive, with a white-cell count of 4,250 and a red count of 4,260,000 Even with exhaust ventilation of a good type giving average atmospheric benzol concentrations of less than 100 parts per million, the hazard from the use of benzol is evidently not entirely removed. Furthermore, our studies indicate that such excellent systems of ventilation are rare. Under the conditions in which benzol is actually used in industry to-day we have found that out of a total of 81 exposed workers examined, 26 showed a blood picture so characteristic as strongly to suggest benzol poisoning We are forced to conclude that the use of benzol (except in inclosed mechanical systems), even when the workers are protected by the most complete and effective systems of exhaust ventilation, keeping the average concentration of benzol in the workroom air below 100 parts per million, involves a substantial hazard Every possible effort should, therefore, be made to develop the use of substitute solvents of a less toxic nature wherever this is possible.

CONCLUSIONS IN REGARD TO THE USE OF BENZOL IN INCLOSED SYSTEMS

As pointed out above, benzol is used in industry under two more or less distinct sets of conditions. In the manufacture of benzol from coal and coal tar, in the blending of motor fuels, and in the chemical industries the solvent is necessarily handled in closed containers and pipe systems. Here chronic poisoning is unlikely to occur and the chief hazard arises from acute poisoning due to carelessness in the cleaning of tanks, breaks in the apparatus, and similar accidents.

With regard to this type of process it seems certain that with proper care in construction, maintenance, and operation, the use of benzol can be made sufficiently safe to warrant its employment. It is true that fatal accidents have occurred, and will no doubt continue to occur, in such processes, just as such accidents occur, and will continue to occur, from the use of steam boilers. The danger is, however, in both instances a controllable one, to be met by careful attention to safety provisions and not by the abandonment of the use of the substance or device in question.

The chief measures of protection which should be enforced in industries of this type are—

(*a*) Regular and systematic inspection of apparatus to insure against breaks or accidental leakage.

(*b*) The greatest possible care in freeing tanks or other receptacles which have contained benzol from all traces of the substance before they are entered for cleansing or repairing.

(c) The protection of workers entering inclosed spaces likely to contain benzol fumes by the use of positive pressure air helmets or hose masks; and the conduct of all such work by teams of two or more men who are familiar with the dangers involved.

CONCLUSIONS IN REGARD TO THE USE OF BENZOL AS A SOLVENT

In the rubber industry, in artificial-leather manufacture, in sanitary-can manufacture, in dry cleaning, and in the use of paints and varnishes benzol is employed as a solvent or vehicle under conditions which, almost of necessity, permit more or less evaporation of the solvent into the atmosphere. Here there is relatively little danger of acute benzol poisoning but very great danger of chronic poisoning, arising from prolonged or repeated exposure to the fumes.

In order to minimize such hazards as far as possible, there are two general types of precautions which should be taken, tending, (1) to decrease the degree of exposure and (2) to detect and control incipient poisoning in its earliest possible stages.

(1) To diminish exposure, inclosed processes should, of course, be used wherever possible, and whenever containers are cleaned or apparatus repaired the special precautions discussed in the preceding paragraph dealing with acute poisoning should be observed. Wherever employees are likely in the course of their work to be exposed to benzol fumes, as in the ordinary solvent and evaporative processes or in handling the products of such processes, they should be protected by the most effective local exhaust ventilation designed according to the following general principles:

(a) Where benzol is evaporated at room temperatures air removal by local exhaust ventilation with down draft is recommended, although in certain inclosed processes direct ventilation (from the inclosure) with upward draft may be indicated.

(b) Where localized heat is applied in the evaporation of the benzol, hoods or inclosures should be provided with up-draft local exhaust. This draft should be sufficiently intensive and applied so closely to the point of origin of the evaporating benzol as to insure the complete removal of all of the benzol before the heated surface is removed from the hood or inclosure. This recommendation deals with specific processes where sufficient upward air movement is created by the heated surface to overcome the natural density of the benzol vapor.

Masks and respirators should not be relied upon to protect the worker against ordinary routine exposure to benzol fumes, since such devices can not be made efficient without at the same time making them too uncomfortable to be worn continuously.

(2) To detect incipient benzol poisoning at a stage when its effects can be minimized, it seems essential to the committee that all work-

ers to be employed in processes where exposure to the fumes of this solvent is involved, should be given a thorough medical examination before employment, and reexamined, with systematic blood counts, once a month thereafter. In addition to this routine reexamination absence from work should be promptly followed up by some person conversant with the symptoms of benzol poisoning and the employees themselves should be made familiar with the symptoms which are most likely to occur.

No worker should be employed in a benzol process who shows signs of—

(*a*) Organic disease of heart, lungs, or kidneys.
(*b*) Hemorrhagic tendencies.
(*c*) Anemia or any unusual blood picture

Any worker who, on reexamination, shows any of the following symptoms should be promptly excluded from benzol exposure and transferred to some other department of the industry

(*a*) Hemorrhages from the mucous membranes of the nose, mouth, or other organs.
(*b*) Decrease of more than the following from the employee's normal blood picture (normal conditions to be obtained from previous examinations of the individual employee)—
  (1) White cells: Decrease of 25 per cent; but in no case should an employee with a white cell count of less than 5,000 be continued in benzol processes.
  (2) Red cells: Decrease of 25 per cent.
  (3) Hemoglobin: Below 70 per cent.

(NOTE.—Reduction in white cells is the most important condition to be noted.)

VIII. BIBLIOGRAPHY

(1) Beilstein: Handbuch der organischen Chemie. 4th Ed., Berlin, 1922, **5**, p. 179
(2) Ullman, F.: Enzyklopadie der technischen Chemie. Berlin, 1915, 2, p 360.
(3) Lehmann, K B Experimentelle Studien über den Einfluss technisch und hygienisch wichtiger Gase und Dämpfe auf den Organismus. Arch. f. Hyg , 1911–1912, **75**, pp. 1–119
(4) The Barrett Company Specifications for Coke Oven Light Oil Distillates. June 1, 1922, pp. 27
(5) Hamilton, A : Industrial poisons encountered in the manufacture of explosives. J. A. M A., May 19, 1917, **68**, No 20, p. 1445.
(6) A new domestic poison The Lancet, Jan. 25, 1862, **1**, p. 105.
(7) Acute poisoning by benzoline St. George's Hospital Report, 1877–1878, **9**, p. 19.
(8) Averill, C : Benzol poisoning. Brit. Med. Jour., March 30, 1889, **1**, p. 709.
(9) Rambousek, J. Gewerbliche Vergiftungen. Leipzig, 1911, pp. 431. Translated by T. M. Legge. Edward Arnold, London, 1913.
(10) Jahresberichte der Gewerbe-Aufsichtsbeamten und Bergbehorden fur das Jahr 1902.

(11) Egli· Ueber die Unfalle bei chemisches Arbeiter 1903, S. 58.
(12) Zeitschr f angew Chemie, Part 21, S. 675, Nov 1, 1896
(13) Simonin· Intoxication par ingestion accidentelle de benzene. Bull. et mém. Soc méd d hôp de Paris. Feb 20, 1903, 20, p 1999
(14) Schmitz, E · Zur chemischen Diagnose der akuten Benzolvergiftung. Deutsch. med Wchnschr, Oct 14, 1915, **41**, No 42, p 1250
(15) Hetzer, W.· Akut entstandene Pylorusstenose nach Benzolvergiftung. Deutsch. med Wchnschr., May 12, 1922, **48**, No 19, p. 627
(16) Nick, H . Erfolgreiche Behandlung einer schweren akuten Benzolvergiftung durch Lecithin-emulsion. Klin. Wchnschr, Jan. 8, 1922, **1**, No. 2, p 68.
(17) Chem Ind. 1905, S 442.
(18) Chem Ind, 1905, S 44.
(19) Gewerbl Techn Ratgeber, 1906, Heft 17, S. 298
(20) Chem Ind 1906, S 398
(21) Lewin, L : Die akute todliche Vergiftung durch Benzoldampf Munchen med Wchnschr, Nov 26, 1907, **54**, No. 48, p 2377
(22) Hamilton, A. The growing menace of benzene (benzol) poisoning in American industry. J. A M. A, March 4, 1922, **78**, No 9, p 627.
(23) Fabrikfeuerwehr, 1909, S 43
(24) Chem Ind, 1909 S. 25.
(25) Chem Ind, 1909, No. 14, S 25
(26) Jahresb d Staatl Aufsichtsbeamten uber Unfall Verbutung. 1909. Cited in Concordia, 1910, p 287.
(27) Annual Report of the Chief Inspector of Factories and Workshops, Great Britain, 1918, p 78
(28) Beisele, P.: Ein Beitrag zur Kasuistik der Benzoldampfvergiftung Munchen med Wchnschr, Oct. 15, 1912, **49**, No. 42, p. 2286
(29) Buchmann, E : Zur Frage der akuten Benzolvergiftung Berl. klin Wchnschr May 22, 1911, **48**, No 21, p 936
(30) Jahresberichte der Gewerbe-Aufsichtsbeamten und Bergbehorden fur das Jahr 1912
(31) Heffter, A : Ueber die akute Vergiftung durch Benzoldampf Deutsch. med Wchnschr, Feb 11, 1915, **41**, No. 7, p 182
(32) Albaugh, A. P : A case of fatal poisoning due to spraying in a varnish department. Ohio Public Health Journal, 1915, **6**, p 512–514.
(33) Robinson, J A Danger in entering chemical tanks. Chemical Engineering, Oct 1916, p. 242.
(34) Harrington, T F. Industrial benzol poisoning in Massachusetts. Boston M. and S J., Aug. 16, 1917, **177**, No 7, p 203.
(35) Dworetzky, A : Rätselhafte Massvergiftungen in Russischen Fabriken. München med. Wchnschr., June 9, 1914, **61**, No. 23, p 1306.
(36) Adamkiewicz, Martin· Schwer Vergiftung durch Benzoldampfe mit nicht tödlichen Ausgang. Deutsch. med. Wchnschr, Oct. 14, 1920, **46**, No. 42, p. 1171.
(37) Binder, A.: Zur akuten tödlichen Vergiftung mit Benzoldämpfen. Monatschr. f. Unfallheilk., 1921, **28**, p 202–206.
(38) Cronin, H. J : Benzol poisoning in the rubber industry. Boston M. and S. J, Dec. 18, 1924, **191**, No. 25, p. 1164.
(39) Schaefer: Verwendung und schadlich Wirkung einiger Kohlenwasser und anderen Kohlenstoffverbindungen. Hamb. Gew. Insp., Arb. und Sonderberichte, 1909.
(40) Sury-Bienz: Todtliche Benzoldampvergiftung. Vrtljhschr. f. gerichtl. Med., July 1888, **49**, p. 138.

(41) Beinhauer. Ueber Benzolvergiftung sowie uber die Betheiligung der Medicinalbeamten bei Begutachtung von Neuanlagen und Veranderungen gewerblicher Anlagen Munchen med. Wchnschr, Sept. 22, 1896, **43**, No 30, p 902

(42) Annual Report of the Chief Inspector of Factories and Workshops for the Year 1918 (Great Britain)

(43) Kobert, R Lehrbuch der Intoxikationen. Stuttgart, 1906

(44) Greiff, F Ueber Kohlenoxydvergiftung bei Theerdistillation. Vrtljhrschr f. gerichtl. Med., N S 1890, **52**, p 359

(45) Santesson, C G: Ueber chronische Vergiftungen mit Steinkohlen-theerbenzin Vier Todesfalle. Arch f. Hyg, 1897, **31**, p. 336.

(46) Lenoir and Claude: Bull et mém. Soc méd d hôp. de Paris, Oct 20, 1897.

(47) Oliver, T Dangerous Trades London, 1909

(48) Selling, L Benzol as a Leucotoxin Beitr z. path Anat. u. z allg Path, 1911, **51**, p 576.

——— A preliminary report of some cases of purpura hemorrhagica due to benzol poisoning Johns Hopkins Hosp. Bull., Feb 1910, **21**, No. 227, p 33

(49) K K Gewerbe Inspectorem, p. 490, 1911

(50) Glaser, C Investigation into several cases of poisoning by vapors of "C. P" benzol Johns Hopkins Hosp. Bull, Jan, 1911, **22**, No. 238, p. 8.

(51) McClure, R D Pernicious anemia treated by splenectomy and systematic often repeated transfusion of blood. J A M. A., Sept. 9, 1916, **67**, No. 11, p 793

(52) Hogan, J F., and Shrader, J H Benzol poisoning. Am. Jour. Pub. Health, April, 1923, **13**, No. 4, p. 279.

(53) Hamilton, A: Industrial poisons in the United States. New York, Macmillan and Company, 1925, pp. 590.

(54) Legge, T M. Chronic benzol poisoning. Jour. Indus. Hyg, March, 1920, **1**, No. 11, p 539

(55) Bull N Y. State Industrial Commission, No 2, p. 20, 1920.

(56) Newton, C. R Industrial blood poisons J A M. A, Apr. 24, 1920. **74**, No 17, p. 1149

(57) Flandin, C, and Roberti, J Purpura hemorrhagique mortel due à une intoxication professionnelle par les vapeurs de benzol. Bull. et mém. Soc. méd d. hôp. de Paris, **46**, 3 S, p 58. Abst. J. A. M. A., 1922, **78**, p. 848.

(58) Starr, E B Poisoning by benzene carbon tetrachloride cement with special reference to the early symptoms of benzene poisoning. Jour. Indus. Hyg, Sept, 1922, **4**, No. 5, pp 203–11.

(59) Reifschneider, C A.: Benzol poisoning. Its occurrence and prevention. Proc. Nat. Saf Council, 1922, p 249.

(60) Meda, G.. Il Benzolismo Professionale Il Lavoro, 1922, **13**, 264.

(61) Pugliese, A.: Rend. Ist Lombardo, **55**, 404–443. Chem. Abs, Apr. 20, 1920, **17**, 1516–1517.

(62) Brücken. Ueber chronische Benzolvergiftung Deutsch. med. Wchnschr, Aug. 24, 1923, **49**, No 34, p. 1120.

(63) Faure-Beaulieu, M., et Levy-Bruhl, M.: Intoxication benzolique professionnelle Anémie grave avec purpura hemorrhagique Syndrome medullaire fruste. Bull. et mém. Soc. méd. d hôp. de Paris, 1922, 3 S, **46**, p. 1466.

(64) Teleky, L., and Weiner, E: Ueber Benzolvergiftung Klin. med. Wchnschr., Feb 5, 1924, **3**, No. 6, p. 226

(65) Rohner, F. J., Baldridge, C. W., and Hansmann, G. H.: Chronic benzol poisoning. Proc. Soc. Exp Biol and Med, Dec, 1925, **33**, No. 3, p. 223.

(66) Schwenke, H Poisoning by benzol fumes Jr Gasbel, 1920, **63**, p 142
(67) Carozzi, L. Results of a hygienic and sanitary inquiry into the Italian printing trade Transactions of the Fifteenth Int Cong on Hyg and Demography, **3**, Part 2, p 857
(68) Vignolo-Lutati C Rubber dermatitis Il Morgagni, 1913, **55**, Part 1, p 271 Abst Brit Med Jour, 1913, **2**, p 886
(69) Milian, G Benzene erythema Bull et mém Soc méd de hôp de Paris, Nov 3, 1922, **46**, p 1441. Abst J A M A, Dec 30, 1922, **79**, No 27, p. 2255
(70) Wolff, H Ueber die Giftigkeit von Benzol, Benzine, und Turpentinol. Farben Ztg, **16**, 2855–7 Abst in Chem Zentralbl 1911, p 1363
(71) Burnet, J Industrial benzene poisoning Clin. Jour London, 1918, **47**, 152
(72) Fontana, G Giornale de Clin Med 1921, No 3. Abst in Il Lavoro, 1921, **2**, No 3, p 329
(73) Agasse-Lafont and Heim Recherches sur l'Hyg du Travail Indust, Paris, 1912, 83
(74) Rabe, R F, and Hirshland, F H: Partial provings of benzol, iodine, and kalibichromium N Y. Homeopathic Coll. Jour Am Inst. Homeopathy, 1920, **13**, p. 499.
(75) Langlois, J. P, and Desbouis, G: Des effects des vapeurs hydrocarbonées sur le sang Jour physiol path gen 1907, **9**, p. 253–262.
(76) Selling, L Benzol as a leucotoxin Johns Hopkins Hosp Rep 1916, **17**, p 83
(77) Gardner, H. A. Physiological effects of vapors from a few solvents used in paints, varnishes, and in varnishes and lacquers Scientific Section Educat Bureau, Paint Manufacturers Assn of U S, 1925.
(78) Weiskotten, H. G, Schwartz, S. C., Steensland, H S: The action of benzol. I On the significance of myeloid metaplasia of the spleen Jour. Med. Res, Sept. 1915, **33**, No 152, p 127.
(79) Pappenheim, A: Zur Benzolbehandlung der Leukamie und sonstiger Blutkrankheiten Wien klin. Wchnschr, Jan. 9, 1913, **26**, No 2, p 48.
(80) Weiskotten, H G, and Steensland, H S: The action of benzol V The diphasic leucopenia as a polynuclear amphophile phenomenon (rabbit). Jour Med Res, Mar 1919, **39**, No 173, p 485
(81) Duke, W W Causes of variation in the platelet count. Arch. Int. Med., Jan. 1913, **41**, No 1, p 100
(82) Hurwitz, S H, and Drinker, C. K The factors of coagulation in the ex-experimental aplastic anemia of benzol poisoning, with special reference to the origin of prothrombin Jour Exp Med, May 1, 1915, **21**, No 5, p. 401
(83) Weiskotten, H G, Wyatt, T C., and Gibbs, R F. D.: The action of benzol. VII. Thrombocytopenia and thrombocytosis coincident with marrow necrosis and marrow regeneration. Jour. Med. Res., Sept 1924, **49**, No. 194, p 593
(84) Forbes, H. S, and Hompe, L: Carbon monoxide, illuminating gas, and benzol Their effect on blood coagulating time. Jour. Indus Hyg, Nov. 1921, **3**, No. 7, p 213
(85) Winternitz, M C, and Hirschfelder, A D.: Studies on experimental pneumonia in rabbits, Parts I to III. Jour Exp Med., July 1, 1913, **18**, No. 1, p. 50.

(86) Kline, B S, and Winternitz, M C: Studies upon experimental pneumonia in rabbits, V Jour Exp Med, July 1, 1913, **18**, No 1, p 50
(87) Weiskotten, H. G, and Steensland, H S Action of benzol. IV Spontaneous infections, with special reference to the diphasic leucopenia (rabbit) Jour Exp Res, Nov 1917, **37**, No 165, p. 215.
(88) Weiskotten, H G, Schwartz, S C, and Steensland, H S. The action of benzol II. The deuterophase of the diphasic leucopenia and antigen-antibody reaction. Jour. Med Res, Sept. 1916, **35**, No. 158, p 63
(89) Schiff, F.. Einfluss des Benzols auf die aktive Anaphylaxie des Meerschweinchens. Zeit f. Immunitat., 1914, **23**, p. 61
(90) Hektoen, L: The effects of benzene on antibody formation. Jour Inf. Dis, July 1916, **19**, No 1, p 67
(91) Rusk, G Y Univ of California Publications, 2, p 139.
(92) Simonds, J. P, and Jones, H M.· Effects of injections of benzol on production of antibodies Jour. Med Res, Nov 1915, **33**, No. 153, p. 197.
(93) White, W C, and Gammon, A. M The influence of benzol inhalations on experimental pulmonary tuberculosis in rabbits. Trans Assoc Amer. Phys, 1914, **29**, p 332
(94) Camp W E, and Baumgartner, E A.: Inflammatory reactions in rabbits with a severe leucopenia. Jour. Exp Med, Aug. 1, 1915, **22**, No. 2, p. 174.
(95) Juvalta, N Ist der Benzolkern in Tierkörper Zerstorbar? Ztschr. f. physiol Chem, 1889, **13**, p. 26.
(96) Jaffe, M Ueber die Aufspaltung des Benzolrings im Organismus Ztschr. f physiol Chem, Sept 11, 1909, **62**, p. 58.
(97) Fuchs, D, and Soos, A Ueber die Verbrennung des Benzols in Organismus des Menschen Ztschr. f. physiol, Chem. Sept 27, 1916, **98**, p. 11.
(98) Sohn, I. Ueber die Beeinflussung des Stoffwechsels durch Benzol sammt Bemerkungen uber seine Darreichung bei der Leukamie. Wien. klin. Wchnschr, Apr. 10, 1913, **26**, No 15, p 573
(99) Brewer, R K, and Weiskotten, H G The action of benzol. III. The urinary phenols, with special reference to the diphasic leucopenia Jour. Med. Res, Sept 1916, **35**, No. 158, p. 71.
(100) Underhill, F P, and Harris, B. Influence of benzol upon certain aspects of metabolism. Jour. Ind. Hyg., March 1923, **4**, No. 11, p. 491.
(101) Hayhurst, E R, and Kindel, D J.. Occupational diseases reported to the Ohio State Department of Health for the five-year period ending June 30, 1925. Jour Ind Hyg, Apr. 1926, **8**, No 4, p 143.
(102) Harbeck, E., and Lunge, G: Quantitative Scheidung von Äthylen und Benzoldampf Zeit f. Anorgan. Chemie, 1898, **16**, p. 26
(103) Lehmann, K. B., and others. Quantitative Untersuchungen uber die Aufnahme von Benzol durch Tier und Mensch aus der Luft Arch f. Hyg., 1909–10, **71–72**, p. 307.
(104) Elliott and Dalton, J. The estimation of small quantities of acetone, alcohol, and benzene in air The Analyst, Apr. 1919, **44**, No. 517, p. 132.
(105) Pfeiffer, P.: Chem Zeit 1909, 28, p 884
(106) Tausz, J.· The determination of the benzol content of coke oven gas and illuminating gas by means of active charcoal. Mitteilungen des chemisch-technischen Institutes der technischen Hochschule Karlsruhe Oct. 1924, **1**, p 19.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Recent studies relating to the purification of water and the action of various waters on lead and copper pipes.—John C Thresh and John F. Beale *Surveyor*, vol 68, No 1771, December 25, 1925, pp. 579–580. (Abstract by Rudolph E Thompson.)

Excess lime treatment.—Data derived from the operation of a 25,000-gallon experimental plant in connection with the proposed supply of Southend Water Co , from the Rivers Chelmer and Blackwater are given The purification process consisted of excess lime treatment, recarbonation, and rapid sand filtration. Sufficient lime was added to maintain an excess of 10 p p. m. after 24 hours, the process being controlled by the reaction of the treated water to brilliant cresyl blue. With this excess the total number of bacteria was reduced from thousands to units, *B coli* was invariably absent in 100 c. c. quantities, color of treated water was less than 10 American Public Health Association units, and organic matter was reduced 50 per cent. Lime in the form of lime water was found to be more efficient and economical than milk of lime The addition, prior to adding the lime, of 1 gr. of aluminum sulphate per gallon was found necessary for rapid precipitation and color removal.

B. coli as an index of fecal contamination.—Contamination by birds and fish does not adequately explain the abundance of *B. coli* in certain stored waters, compared with the complete disappearance of this organism in water stored under laboratory conditions. In a recent investigation *B. coli* was found to flourish in the presence of the weed *Enteromorpha intestinalis*, which is usually found in brackish water but which in this case was growing abundantly in reservoir and filter beds Similar multiplication occurred in presence of *Oscillatoria nigra.* Decaying weeds have been found to give rise to an enormous increase in *B. aerogenes.* These results indicate that presence of *B. coli* is not always evidence of manurial pollution.

DEATH RATES IN A GROUP OF INSURED PERSONS

Rates for Principal Causes of Death for May, 1926

The accompanying table is taken from the Statistical Bulletin for June, 1926, published by the Metropolitan Life Insurance Co., and presents the mortality experience of the industrial insurance department of the company for May, 1926, as compared with April, 1926, and with May and year, 1925. The rates are based on a strength of approximately 17,000,000 insured persons in the industrial populations of the United States and Canada.

The Bulletin states:

The death rate * * * during May (9.1 per 1,000) was substantially the same as reported for that month in 1925. Pronounced increases over last year's May figures were registered in the mortality from measles, whooping cough, influenza, and pneumonia; but these increases were about compensated by lower rates for diphtheria, tuberculosis, diarrheal diseases, and accidents. The May death rate was the lowest recorded for any month of 1926, and the decline of 24.2 per cent as compared with April is rather in excess of the seasonal drop expected at this time of the year. The outstanding factors in the decline from the April figure were lower death rates for influenza and pneumonia, the mortality from these diseases declining 57.8 per cent and 43.2 per cent, respectively.

Although the measles rate dropped from 21.3 per 100,000 in April, to 16.6 in May, and the whooping cough figure from 15.4 to 11, the May rates are still inordinately high for these two maladies, which the average citizen is wont to regard as of minor importance when compared with diphtheria and scarlet fever. Present-day mortality statistics of these diseases of childhood present a striking contrast to those of a few years ago. In this connection comparison of the table with a similar table for May, 1920, discloses a diphtheria rate of 16.2 per 100,000, which was much higher than the figure then shown for measles, and two and one-half times as high as the whooping cough death rate then recorded, despite the fact that 1920 was a year of above-average mortality from both measles and whooping cough. In May, 1926, on the other hand, we find measles to be the leader among the diseases of childhood, causing approximately twice as many deaths as diphtheria. Whooping cough is now second in importance with a much higher death rate than diphtheria and is charged with three and one-half deaths to every one from scarlet fever. While it is true that 1926, to date, has been a year of above-average prevalence of measles and whooping cough, it bids fair to mark a new minimum death rate for what has always been the most dreaded of the diseases of childhood; that is, diphtheria.

Death rates (annual basis) for principal causes per 100,000 lives exposed, April and May, 1926, and May and year, 1925

Cause of death	Death rate per 100,000 lives exposed [1]			
	May, 1926	April, 1926	May, 1925	Year 1925 [2]
Total, all causes	913.8	1,199.4	901.1	906.9
Typhoid fever	1.8	2.5	2.0	4.6
Measles	16.6	21.3	5.1	3.3
Scarlet fever	3.4	5.1	4.7	3.5
Whooping cough	11.0	15.4	8.1	7.7
Diphtheria	8.6	9.0	10.6	10.6
Influenza	38.5	91.3	25.5	21.9
Tuberculosis (all forms)	98.8	114.9	104.5	98.0
Tuberculosis of respiratory system	86.4	99.5	89.3	85.8
Cancer	65.5	77.1	67.2	70.5
Diabetes mellitus	14.0	20.1	14.1	15.2
Cerebral hemorrhage	50.2	61.3	50.6	53.7
Organic diseases of heart	126.6	171.8	126.7	126.6
Pneumonia (all forms)	108.4	191.0	96.5	86.5
Other respiratory diseases	12.5	19.6	14.5	13.3
Diarrhea and enteritis	15.4	17.8	19.4	36.6
Bright's disease (chronic nephritis)	69.6	82.6	68.0	69.8
Puerperal state	15.2	17.9	15.7	16.5
Suicides	7.8	7.6	5.4	6.9
Homicides	5.9	7.6	6.9	7.2
Other external causes (excluding suicides and homicides)	53.6	53.1	56.7	64.2
Traumatism by automobiles	14.9	13.5	14.4	16.5
All other causes	190.6	212.6	198.8	190.5

[1] All figures include infants insured under 1 year of age.
[2] Based on provisional estimate of lives exposed to risk in 1925.

DEATHS DURING WEEK ENDED JULY 10, 1926

Summary of information received by telegraph from industrial insurance companies for week ended July 10, 1926, and corresponding week of 1925 (From the Weekly Health Index, July 14, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended July 10, 1926	Corresponding week, 1925
Policies in force	64,650,237	60,488,896
Number of death claims	8,898	9,399
Death claims per 1,000 policies in force, annual rate	7.2	8.1

Deaths from all causes in certain large cities of the United States during the week ended July 10, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, July 14, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended July 10, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended July 10, 1926 [2]
	Total deaths	Death rate [1]		Week ended July 10, 1926	Corresponding week, 1925	
Total (64 cities)	6,333	11.7	11.8	702	770	[3] 56
Akron	31			6	2	64
Albany [4]	25	11.0	18.6	1	5	21
Atlanta	77			16	11	
White	35			8		
Colored	42	(5)		8		
Baltimore [4]	184	11.9	12.7	24	29	70
White	137			16		57
Colored	47	(5)		8		130
Birmingham	82	20.3	15.5	15	14	
White	43			10		
Colored	39	(5)		5		
Boston	183	12.1	14.0	19	21	54
Bridgeport	26			4	1	68
Buffalo	134	12.8	15.6	22	19	92
Cambridge	18	7.7	10.9	2	4	33
Camden	27	10.7	13.8	6	2	101
Canton	21	10.0	16.2	1	4	22
Chicago [4]	624	10.7	10.5	59	57	52
Cincinnati	147	18.6	11.8	19	12	118
Cleveland	177	9.6	10.5	21	23	54
Columbus	86	15.7	12.9	5	9	46
Dallas	77	20.1	11.3	10	9	
White	62			10		
Colored	15	(5)		0		
Dayton	39	11.5	8.4	2	3	31
Denver	53	9.7	13.7	7	5	
Des Moines	29	10.4	12.2	4	2	67
Detroit	274	11.1	9.5	47	43	76
Duluth	23	10.6	10.4	4	5	94
El Paso	36	17.2	16.4	6	7	
Erie	27			5	0	95
Fall River [4]	30	11.9	9.3	6	5	87
Flint	24	9.1	8.8	3	4	50
Fort Worth	28	9.2	12.0	3	5	
White	24			3		
Colored	4	(5)		0		
Grand Rapids	29	9.7	14.9	5	8	72
Houston	58			4	8	
White	41			2		
Colored	17	(5)		2		
Indianapolis	92	13.1	14.7	9	11	66
White	76			8		68
Colored	16			1		55
Jersey City	57	9.3	9.4	14	6	99
Kansas City, Kans	42	18.7	16.6	3	6	52
White	32			1		21
Colored	10	(5)		2		263
Kansas City, Mo	97	13.5	14.0	6	6	
Los Angeles	195			13	25	36
Louisville	110	18.4	17.1	[illegible]	13	112
White	80			8		80
Colored	30	(5)		5		314

Footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended July 10, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, July 14, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended July 10, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended July 10, 1926 [2]
	Total deaths	Death rate [1]		Week ended July 10, 1926	Corresponding week, 1925	
Lowell	23			4	3	74
Lynn	15	7.5	12.1	3	2	75
Memphis	81	23.9	16.7	9	6	
White	39			3		
Colored	42	(5)		6		
Milwaukee	102	10.3	7.8	15	6	69
Minneapolis	94	11.3	10.1	8	6	45
Nashville [4]	73	27.8	19.5	7	5	
White	45			4		
Colored	28	(5)		3		
New Bedford	20			0	7	0
New Haven	45	12.9	11.4	7	2	96
New Orleans	120	14.9	19.7	9	24	
White	61			2		
Colored	59	(5)		7		
New York	1,151	10.1	10.7	134	163	54
Bronx Borough	115	8.4	9.1	14	16	46
Brooklyn Borough	361	8.4	9.0	42	56	43
Manhattan Borough	502	13.9	14.0	64	75	71
Queens Borough	101	6.9	8.0	8	12	33
Richmond Borough	42	15.3	17.0	6	4	105
Newark, N. J.	82	9.3	13.0	4	17	19
Norfolk	37	11.1	11.1	5	5	93
White	19			2		59
Colored	18	(5)		3		149
Oakland	42	8.4	9.9	3	7	35
Oklahoma City	22			2	5	
Omaha	48	11.6	13.3	7	2	73
Paterson	25	9.1	9.9	3	0	52
Philadelphia	455	11.8	10.4	31	51	41
Pittsburgh	112	9.2	10.5	13	19	43
Portland, Oreg.	57			2	4	20
Providence	48	9.1	12.3	7	3	58
Richmond	67	18.5	17.1	15	11	188
White	30			5		98
Colored	37	(5)		10		350
Rochester	64	10.4	11.2	7	4	56
St. Louis	216	13.6	15.2	17	23	
St. Paul	68	14.3	10.4	3	3	27
Salt Lake City [4]	38	14.9	10.8	4	5	55
San Antonio	56	14.2	17.4	14	18	
San Diego	34	16.1	15.2	2	2	42
Schenectady	8	4.5	9.0	2	2	58
Seattle	64			3	6	28
Somerville	16	8.3	9.5	1	1	26
Spokane	32	15.3	11.0	2	3	47
Springfield, Mass.	37	13.3	11.4	5	4	72
Syracuse	37	10.5	15.5	4	1	51
Tacoma	20	9.8	8.0	1	1	23
Toledo	61	10.8	11.1	4	4	39
Trenton	34	13.2	17.4	2	6	33
Washington, D. C.	136	13.4	12.3	10	12	57
White	83			3		25
Colored	53	(5)		7		128
Waterbury	9			1	3	21
Wilmington, Del.	30	12.6	12.4	1	2	23
Worcester	41	11.1	11.8	2	5	23
Yonkers	22	9.9	8.7	1	3	22
Youngstown	38	12.0	10.1	4	5	51

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 62 cities.
[4] Deaths for week ended Friday, July 9, 1926.
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population. Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Kansas City, Kans., 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended July 17, 1926

ALABAMA

	Cases
Chicken pox	2
Diphtheria	5
Influenza	2
Lethargic encephalitis	1
Malaria	58
Measles	56
Mumps	7
Pellagra	18
Pneumonia	23
Scarlet fever	4
Smallpox	20
Tetanus	2
Tuberculosis	45
Typhoid fever	83
Whooping cough	47

ARIZONA

	Cases
Chicken pox	2
Diphtheria	2
Measles	1
Scarlet fever	1
Tuberculosis	1
Typhoid fever	4

ARKANSAS

	Cases
Cerebrospinal meningitis	1
Chicken pox	11
Diphtheria	2
Hookworm disease	1
Influenza	4
Malaria	51
Measles	12
Mumps	2
Paratyphoid fever	1
Pellagra	8
Scarlet fever	6
Smallpox	4
Tuberculosis	9
Typhoid fever	7
Whooping cough	12

CALIFORNIA

	Cases
Cerebrospinal meningitis:	
Fresno	1
Sacramento	1
San Bernardino County	1
San Joaquin County	1
Chicken pox	67
Diphtheria	91
Influenza	4
Lethargic encephalitis:	
San Francisco	1
Santa Ana	1
Measles	228
Mumps	66
Poliomyelitis:	
Monrovia	1
Sacramento	1
Scarlet fever	63
Smallpox:	
Oakland	11
Scattering	10
Tuberculosis	173
Typhoid fever	12
Whooping cough	63

COLORADO

	Cases
Chicken pox	24
Diphtheria	17
Hookworm disease	1
Measles	24
Mumps	2
Pneumonia	2
Scarlet fever	10
Smallpox	1
Tuberculosis	38
Typhoid fever	7
Whooping cough	26

CONNECTICUT

	Cases
Chicken pox	29
Diphtheria	11
German measles	4

CONNECTICUT—continued

	Cases
Measles	76
Mumps	2
Pneumonia (all forms)	16
Scarlet fever	18
Septic sore throat	1
Tetanus	2
Tuberculosis (all forms)	36
Typhoid fever	7
Whooping cough	35

DELAWARE

Chicken pox	1
Malaria	3
Measles	2
Scarlet fever	4
Tuberculosis	3
Whooping cough	3

FLORIDA

Chicken pox	7
Diphtheria	13
Malaria	6
Measles	12
Mumps	1
Pneumonia	1
Scarlet fever	6
Smallpox	13
Tuberculosis	12
Typhoid fever	18
Whooping cough	19

GEORGIA

Cerebrospinal meningitis	1
Chicken pox	15
Diphtheria	3
Dysentery	17
Hookworm disease	7
Influenza	8
Malaria	53
Measles	19
Mumps	5
Septic sore throat	4
Smallpox	2
Tuberculosis	29
Typhoid fever	101
Typhus fever	2
Whooping cough	29

IDAHO

Cerebrospinal meningitis	1
Chicken pox	3
Diphtheria	1
Measles	6
Mumps	2
Scarlet fever	6
Smallpox	6
Tuberculosis	1
Typhoid fever	2
Whooping cough	2

ILLINOIS

Cerebrospinal meningitis:	
Cook County	1
Kane County	1
Lake County	1

ILLINOIS—continued

	Cases
Chicken pox	172
Diphtheria	46
Influenza	136
Lethargic encephalitis	
Cook County	2
Iroquois County	1
Measles	425
Mumps	39
Pneumonia	245
Poliomyelitis	
Cook County	3
Douglas County	1
Jefferson County	1
Sangamon County	1
Scarlet fever	108
Smallpox	20
Tuberculosis	434
Typhoid fever	20
Whooping cough	190

INDIANA

Chicken pox	31
Diphtheria	19
Influenza	1
Measles	125
Pneumonia	1
Poliomyelitis	1
Scarlet fever	27
Smallpox	46
Tuberculosis	37
Typhoid fever	6
Whooping cough	71

IOWA

Chicken pox	3
Diphtheria	9
German measles	6
Measles	25
Scarlet fever	14
Smallpox	9
Tuberculosis	2
Whooping cough	7

KANSAS

Cerebrospinal meningitis.	
Chanute	1
Tampa	1
Chicken pox	9
Diphtheria	10
German measles	1
Influenza	3
Measles	47
Mumps	12
Pneumonia	8
Scarlet fever	32
Smallpox	3
Tuberculosis	104
Typhoid fever	9
Whooping cough	90

LOUISIANA

Diphtheria	3
Influenza	29
Lethargic encephalitis	1
Malaria	36
Paratyphoid fever	2

LOUISIANA—continued

	Cases
Pneumonia	45
Poliomyelitis	1
Scarlet fever	4
Smallpox	1
Tuberculosis	54
Typhoid fever	50
Whooping cough	15

MAINE

Chicken pox	7
Diphtheria	3
German measles	8
Measles	87
Mumps	3
Pneumonia	4
Scarlet fever	10
Tetanus	6
Tuberculosis	16
Typhoid fever	1
Whooping cough	12

MARYLAND [1]

Cerebrospinal meningitis	1
Chicken pox	17
Diphtheria	9
Dysentery	5
German measles	1
Influenza	3
Lethargic encephalitis	2
Measles	90
Mumps	30
Pneumonia (all forms)	30
Poliomyelitis	3
Scarlet fever	24
Tetanus	2
Tuberculosis	53
Typhoid fever	15
Whooping cough	116

MASSACHUSETTS

Chicken pox	77
Diphtheria	35
German measles	37
Lethargic encephalitis	2
Malaria	1
Measles	208
Mumps	73
Ophthalmia neonatorum	27
Pellagra	2
Pneumonia (lobar)	31
Poliomyelitis	5
Scarlet fever	110
Septic sore throat	1
Trichinosis	1
Tuberculosis (all forms)	159
Typhoid fever	11
Whooping cough	156

MICHIGAN

Diphtheria	68
Measles	361
Pneumonia	44
Scarlet fever	132
Smallpox	8
Tuberculosis	46
Typhoid fever	7
Whooping cough	129

[1] Week ended Friday.

MINNESOTA

	Cases
Chicken pox	24
Diphtheria	43
Influenza	2
Lethargic encephalitis	1
Measles	97
Pneumonia	3
Poliomyelitis	1
Scarlet fever	102
Tuberculosis	55
Typhoid fever	5
Whooping cough	29

MISSISSIPPI

Poliomyelitis	7
Scarlet fever	6
Smallpox	5
Typhoid fever	51

MISSOURI

(Exclusive of Kansas City)

Cerebrospinal meningitis	4
Chicken pox	4
Diphtheria	28
Malaria	3
Measles	46
Mumps	6
Scarlet fever	35
Smallpox	13
Tetanus	1
Trachoma	1
Tuberculosis	41
Typhoid fever	27
Whooping cough	71

MONTANA

Chicken pox	2
German measles	3
Measles	14
Mumps	3
Ophthalmia neonatorum	1
Rocky Mountain spotted fever—Thurlow	1
Scarlet fever	5
Smallpox	5
Tuberculosis	1
Typhoid fever	2
Whooping cough	6

NEBRASKA

Chicken pox	18
Diphtheria	1
Measles	14
Mumps	2
Pneumonia	4
Scarlet fever	16
Smallpox	16
Tuberculosis	3
Typhoid fever	1
Whooping cough	18

NEW JERSEY

Chicken pox	69
Diphtheria	53
Dysentery	1
Influenza	1
Measles	130
Pneumonia	31

NEW JERSEY—continued

	Cases
Poliomyelitis	1
Scarlet fever	73
Smallpox	2
Trachoma	1
Typhoid fever	16
Whooping cough	88

NEW MEXICO

	Cases
Chicken pox	3
Diphtheria	1
Measles	2
Pellagra	4
Pneumonia	2
Rabies in animals	2
Scarlet fever	2
Tuberculosis	19
Typhoid fever	7
Whooping cough	15

NEW YORK

(Exclusive of Buffalo and New York City)

	Cases
Chicken pox	137
Diphtheria	61
German measles	85
Lethargic encephalitis	2
Malaria	3
Measles	898
Mumps	58
Ophthalmia neonatorum	2
Pneumonia	77
Poliomyelitis	4
Scarlet fever	58
Septic sore throat	2
Smallpox	5
Tetanus	4
Typhoid fever	12
Whooping cough	297

NORTH CAROLINA

	Cases
Cerebrospinal meningitis	1
Chicken pox	17
Diphtheria	16
German measles	21
Measles	123
Poliomyelitis	10
Scarlet fever	7
Septic sore throat	1
Smallpox	31
Typhoid fever	69
Whooping cough	244

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Cerebrospinal meningitis	
Johnston	1
Muskogee	1
Chicken pox	5
Diphtheria	6
Influenza	26
Malaria	79
Measles	17
Mumps	5
Pellagra	56
Pneumonia	11

OKLAHOMA—continued

	Cases
Poliomyelitis—Kiowa	2
Scarlet fever	15
Smallpox	4
Typhoid fever	84
Whooping cough	94

OREGON

	Cases
Chicken pox	16
Diphtheria	14
Influenza	8
Malaria	1
Measles	24
Mumps	15
Rocky Mountain spotted fever	1
Scarlet fever	21
Septic sore throat	3
Smallpox	17
Tuberculosis	12
Typhoid fever	5
Whooping cough	7

PENNSYLVANIA

	Cases
Chicken pox	138
Diphtheria	136
German measles	13
Lethargic encephalitis—Philadelphia	1
Measles	887
Mumps	13
Pneumonia	4
Poliomyelitis—Johnsonburg	1
Scarlet fever	
Philadelphia	33
Scattering	148
Tetanus	3
Tuberculosis	111
Typhoid fever	19
Whooping cough	315

RHODE ISLAND

	Cases
Chicken pox	6
Diphtheria	4
Measles	22
Mumps	3
Pneumonia	1
Scarlet fever	3
Tuberculosis	10
Whooping cough	9

SOUTH DAKOTA

	Cases
Cerebrospinal meningitis	1
Measles	47
Pneumonia	1
Scarlet fever	3
Smallpox	5
Typhoid fever	1
Whooping cough	2

TENNESSEE

	Cases
Chicken pox	7
Diphtheria	1
Dysentery	2
Influenza	7
Lethargic encephalitis	
Chattanooga	1
Crockett County	1

TENNESSEE—continued

Disease	Cases
Malaria	6
Measles	51
Mumps	1
Pellagra	19
Pneumonia	6
Rabies	1
Scarlet fever	9
Smallpox	2
Tuberculosis	39
Typhoid fever	108
Whooping cough	40

TEXAS

Disease	Cases
Cerebrospinal meningitis	1
Chicken pox	12
Dengue	2
Diphtheria	9
Dysentery	6
Influenza	4
Measles	8
Mumps	7
Pellagra	3
Pneumonia	4
Poliomyelitis	4
Scarlet fever	6
Smallpox	14
Tuberculosis	18
Typhoid fever	30
Whooping cough	45

UTAH

Disease	Cases
Chicken pox	8
Diphtheria	5
Measles	4
Mumps	3
Pneumonia	2
Scarlet fever	1
Smallpox	4
Whooping cough	68

VERMONT

Disease	Cases
Chicken pox	16
Diphtheria	1
Measles	53
Mumps	1
Poliomyelitis	1
Scarlet fever	4
Typhoid fever	2
Whooping cough	19

WASHINGTON

Disease	Cases
Cerebrospinal meningitis—	
Lincoln County	1
Stevens County	1
Chicken pox	33
Diphtheria	24
German measles	10
Measles	53
Mumps	6
Poliomyelitis—Yakima	1
Scarlet fever	18
Smallpox	10
Tuberculosis	33
Typhoid fever	4
Whooping cough	36

WEST VIRGINIA

Disease	Cases
Cerebrospinal meningitis—Tucker County	1
Chicken pox	20
Diphtheria	7
Measles	81
Scarlet fever	10
Smallpox	3
Tuberculosis	35
Typhoid fever	16
Whooping cough	12

WISCONSIN

Disease	Cases
Milwaukee:	
Chicken pox	37
Diphtheria	13
Measles	134
Mumps	24
Pneumonia	7
Scarlet fever	3
Tuberculosis	20
Whooping cough	74
Scattering:	
Cerebrospinal meningitis	1
Chicken pox	70
Diphtheria	16
German measles	16
Influenza	14
Measles	652
Mumps	21
Pneumonia	9
Scarlet fever	44
Smallpox	5
Tuberculosis	25
Whooping cough	134

WYOMING

Disease	Cases
Chicken pox	3
Diphtheria	1
German measles	2
Influenza	1
Measles	5
Rocky Mountain spotted fever	1
Scarlet fever	5
Tuberculosis	1
Whooping cough	31

Reports for Week Ended July 10, 1926

DISTRICT OF COLUMBIA

Disease	Cases
Chicken pox	8
Diphtheria	15
Influenza	3
Measles	34
Pellagra	1
Pneumonia	2
Scarlet fever	5
Tuberculosis	17
Whooping cough	27

NORTH DAKOTA

Disease	Cases
Chicken pox	12
Diphtheria	4
German measles	7
Measles	24
Mumps	2
Pneumonia	2
Scarlet fever	24
Smallpox	10
Tuberculosis	3
Whooping cough	36

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
March, 1926										
New Mexico	0	37	141	1	14	0	1	34	10	2
April, 1926										
New Mexico	1	19	8	1	86	1	0	32	7	2
May, 1926										
New Mexico	0	13	1	4	74	1	0	44	0	2
June, 1926										
Georgia	2	21	60	172	460	48	0	5	71	153
Iowa	1	40	1		334		3	116	96	
Massachusetts	9	276	25	2	2,724	2	5	927	0	35
North Dakota	0	20	2		110		0	146	13	0
Tennessee	2	23	82	102	935	117	3	51	62	80
Vermont	0	1	0	0	429	0	2	11	0	2
Wisconsin	6	125	59	0	5,465	0	2	312	2	10

Number of Cases of Certain Communicable Diseases Reported for the Month of May, 1926, by State Health Officers

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	193	56	1,767	190	51	186	521	46	251
Arizona	49	9	41	11	37	10	127	27	9
Arkansas	141	7	268	99	92	35	40	19	155
California	961	454	2,047	1,245	573	144	902	88	324
Colorado	290	71	342	26	133	7	132	3	268
Connecticut	236	81	2,293	45	348	0	156	12	216
Delaware	4	10	194		37	0	11	0	6
District of Columbia	89	71	1,604		132	3	93	5	161
Florida [2]									
Georgia	162	60	581	211	36	138	167	52	155
Idaho	49	24	60	60	68	48	[1] 12	8	54
Illinois	1,082	300	5,095	345	1,397	137	1,853	34	827
Indiana	157	46	3,126	5	484	257	189	14	411
Iowa [2]									
Kansas	364	37	2,527	146	214	77	159	10	604
Kentucky [3]									
Louisiana	22	37	17	34	81	78	230	54	54
Maine	76	9	1,403	135	95	0	46	13	176
Maryland	358	69	1,809	896	244	0	286	24	292
Massachusetts	484	205	3,187	627	956	0	736	30	1,104
Michigan	354	349	6,441	133	1,288	45	628	23	651
Minnesota	502	208	3,520		1,313	52	354	9	264
Mississippi	816	40	1,693	1,232	31	77	413	109	2,077
Missouri	237	311	7,227	111	1,122	47	227	14	349
Montana	85	5	447	23	138	24	56	4	38
Nebraska [2]									
Nevada [4]									
New Hampshire [4]									
New Jersey	710	328	6,991		828	0	486	21	342
New Mexico	74	13	74	50	44	0	103	2	125
New York	1,465	940	13,794	1,078	1,933	9	1,750	83	1,789
North Carolina	383	65	1,705		87	190		21	1,243
North Dakota	46	28	126	60	256	31	12	2	53
Ohio	691	313	8,824	222	1,363	201	769	39	1,660
Oklahoma [5]	143	35	599	49	173	114	141	58	231
Oregon	201	73	407	132	238	107	[1] 65	16	182
Pennsylvania [2]									
Rhode Island	15	30	474	8	36	0	41	2	71
South Carolina	302	79	237	7	62	80	299	99	512
South Dakota	46	19	283	125	417	11	5	0	98
Tennessee	212	60	3,154	106	170	147	281	51	196

Footnotes at end of table

Number of Cases of Certain Communicable Diseases Reported for the Month of May, 1926, by State Health Officers—Continued

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Texas [3]									
Utah [2]									
Vermont	84	3	219	58	31	0	[1] 18	0	118
Virginia	772	69	3,328		206	69	[1] 174	35	721
Washington	337	85	292	192	289	143	184	24	259
West Virginia	113	57	3,394		165	17	141	57	146
Wisconsin	583	126	5,021	508	459	15	109	14	551
Wyoming	88	6	26	16	120	6		0	43

[1] Pulmonary
[2] Report not received at time of going to press
[3] Reports received weekly
[4] Reports received annually
[5] Exclusive of Oklahoma City and Tulsa.

Case Rates per 1,000 Population (Annual Basis) for the Month of May, 1926

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	0 91	0.26	8.36	0 90	0 24	0 88	2.46	0 22	1 19
Arizona	1 37	25	1 15	.31	1.03	.28	3 55	.75	.25
Arkansas	89	04	1 69	.62	58	22	25	12	98
California	2 74	1 29	5.84	3.55	1.63	41	2 57	25	92
Colorado	3 30	81	3 90	30	1 51	08	1 50	03	3 05
Connecticut	1 78	63	17 32	.34	2 63	00	1 18	09	1 63
Delaware	20	50	9 64		1 84	00	[1] 05	00	30
District of Columbia	2 06	1 64	37 11		3 05	07	2 15	12	3 73
Florida [2]									
Georgia	62	.23	2 22	80	14	53	64	20	59
Idaho	1 15	.56	1 40	1 40	1 59	1 12	[1] 28	19	1 26
Illinois	1.81	.50	8.51	58	2.33	23	3.09	06	1 38
Indiana	60	18	11 94	02	1 85	95	72	05	1 57
Iowa [2]									
Kansas	2 35	24	16 33	.94	1 38	50	1 03	06	3 90
Kentucky [3]									
Louisiana	20	23	11	21	.50	49	1 43	34	34
Maine	1 14	13	21 04	2 02	1 42	00	69	19	2 64
Maryland	2 71	52	13 72	6 79	1 85	00	2 17	18	2 21
Massachusetts	1 36	58	8 98	1 77	2 69	00	2 07	08	3 11
Michigan	98	97	17 87	37	3 57	12	1 74	06	1 81
Minnesota	2 28	94	15 93		5 96	24	1 61	04	1 20
Mississippi	5 37	26	11 13	8 10	.20	51	2 72	72	13 66
Missouri	30	1 05	24 46	38	3 80	16	77	.22	1 18
Montana	1 51	09	7 92	41	2 44	43	99	07	67
Nebraska [4]									
Nevada [4]									
New Hampshire [4]									
New Jersey	2 34	1 08	23 06		2.73	00	1 60	07	1 13
New Mexico	2 28	40	2 28	1 54	1 35	00	3 17	06	3 85
New York	1 74	99	14 46	1 13	2 03	01	1 83	09	1 87
North Carolina	1 61	27	7.18		37	80		09	5.24
North Dakota	78	48	2 14	1 02	4 35	53	20	.03	.90
Ohio	1 27	57	16 17	41	2 50	37	1 41	07	3.04
Oklahoma [5]	74	18	3 10	.25	89	59	73	30	1.19
Oregon	2.76	1 00	5 59	1 81	3.27	1 47	[1] .89	22	2.50
Pennsylvania [2]									
Rhode Island	27	55	8 64	15	66	00	75	04	1.29
South Carolina	1 98	52	1.55	.05	41	52	1 96	65	3 36
South Dakota	81	33	4 06	2.19	7 31	19	09	00	1.72
Tennessee	1.02	29	15.22	51	82	71	1.36	25	.95
Texas [3]									
Utah [2]									
Vermont	2 81	10	7 32	1.94	1 04	00	[1] 60	00	3.94
Virginia	3.67	33	15 83		98	33	[1] 83	17	3.43
Washington	2.64	.67	2 29	1 51	2 27	1 12	1.44	19	2.03
West Virginia	82	41	24.58		1 10	12	1.02	41	1.06
Wisconsin	2.42	.52	20 88	2 11	1 91	06	45	06	2 29
Wyoming	4 57	31	1 85	83	6.23	.31		00	2.23

[1] Pulmonary
[2] Report not received at time of going to press
[3] Reports received weekly
[4] Reports received annually
[5] Exclusive of Oklahoma City and Tulsa.

PLAGUE-ERADICATIVE MEASURES IN LOS ANGELES, CALIF.

The following items were taken from the reports of plague-eradicative measures from Los Angeles, Calif.:

June 21 to June 29, 1926

Number of rats trapped	3[illegible]9
Number of rats found to be plague infected	0
Number of squirrels examined	1,371
Number of squirrels found to be plague infected	0
Number of mice trapped	191
Number of mice found to be plague infected	0

Date of discovery of last plague infected rodent, November 6, 1925

Date of last human case, January 15, 1925

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended July 3, 1926, 37 States reported 934 cases of diphtheria For the week ended July 4, 1925, the same States reported 814 cases of this disease Ninety-nine cities, situated in all parts of the country and having an aggregate population of more than 30,350,000, reported 711 cases of diphtheria for the week ended July 3, 1926. Last year, for the corresponding week, they reported 515 cases. The estimated expectancy for these cities was 716 cases The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-four States reported 6,941 cases of measles for the week ended July 3, 1926, and 2,169 cases of this disease for the week ended July 4, 1925. Ninety-nine cities reported 2,483 cases of measles for the week this year and 1,259 cases last year.

Poliomyelitis.—The health officers of 38 States reported 27 cases of poliomyelitis for the week ended July 3, 1926. The same States reported 68 cases for the week ended July 4, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-seven States—this year, 1,802 cases; last year, 1,052 cases; 99 cities—this year, 985 cases; last year, 524 cases; estimated expectancy, 487 cases.

Smallpox.—For the week ended July 3, 1926, 38 States reported 424 cases of smallpox. Last year for the corresponding week they reported 331 cases. Ninety-nine cities reported smallpox for the week as follows: 1926, 63 cases; 1925, 78 cases; estimated expectancy, 71 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—Four hundred and fifty-two cases of typhoid fever were reported for the week ended July 3, 1926, by 36 States. For the corresponding week of 1925 the same States reported 784 cases of this disease Ninety-nine cities reported 94 cases of typhoid fever for the week this year and 193 cases for the corresponding week last year. The estimated expectancy for these cities was 119 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 94 cities, with a population of more than 29,650,000, as follows: 1926, 461 deaths, 1925, 332 deaths.

City reports for week ended July 3, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to acertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	0	1	0	0	0	15	0	2
New Hampshire									
Concord	22,546	0	0	0	0	0	2	0	3
Manchester	83,097	0	1	0	0	0	1	0	2
Vermont									
Barre	10,008	0	0	0	0	0	0	0	0
Massachusetts									
Boston	779,620	21	45	20	0	0	68	41	16
Fall River	128,993	0	3	2	0	0	1	0	5
Springfield	142,065	9	2	0	1	1	2	0	1
Worcester	190,757	2	3	1	0	0	3	0	1
Rhode Island									
Pawtucket	69,760	0	1	0	0	0	0	0	1
Providence	267,918	0	7	2	0	0	20	0	2
Connecticut									
Bridgeport	(1)	0	4	2	1	1	2	0	2
Hartford	160,197	9	4	0	0	0	2	1	4
New Haven	178,927	5	2	0	0	0	20	0	2
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	17	9	12	0	1	12	2	9
New York	5,873,356	161	213	200	16	5	167	0	107
Rochester	316,786	7	5	8	0	0	16	0	6
Sycrause	182,003	12	5	3	0	0	165	8	2
New Jersey									
Camden	128,642	3	3	7	0	0	24	0	2
Newark	452,513	28	12	10	0	0	39	16	3
Trenton	132,020	1	3	2	0	0	16	1	1
Pennsylvania									
Philadelphia	1,979,364	55	49	74	------	7	86	12	29
Pittsburgh	631,563	27	16	12	------	1	96	0	21
Reading	112,707	3	2	0	------	0	8	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409,333	2	6	4	0	2	63	3	5
Cleveland	936,485	37	18	42	0	1	10	2	9
Columbus	279,836	0	2	2	0	0	26	0	2
Toledo	287,380	30	5	5	0	1	95	0	7
Indiana									
Fort Wayne	97,846	1	2	0	0	0	34	0	2
Indianapolis	358,819	6	3	4	0	1	5	0	8
South Bend	80,091	0	1	2	0	0	32	0	0
Terre Haute	71,071	0	0	0	0	0	6	0	0
Illinois:									
Chicago	2,995,239	117	77	32	4	2	253	13	27
Peoria	81,564	1	1	0	0	0	7	1	2
Springfield	63,923	1	1	0	0	0	7	0	1

City reports for week ended July 3, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles cases reported	Mumps cases reported	Pneumonia, deaths reported
EAST NORTH CENTRAL—continued									
Michigan									
Detroit	1,245,824	38	35	68	0	1	23	3	22
Flint	130,316	1	2	2	0	0	68	1	2
Grand Rapids	153,698	4	2	0	0	0	51	1	0
Wisconsin									
Kenosha	50,891	2	0	0	0	0	166	0	0
Madison	46,385	10	0	0	0	0	13	1	0
Milwaukee	509,192	48	10	15	0	0	170	4	8
Racine	67,707	7	1	0	0	0	170	0	2
Superior	39,671	0	0	1	0	0	0	0	2
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	1	1	2	0	0	36	0	1
Minneapolis	425,435	67	10	17	0	2	14	0	6
St. Paul	246,001	8	11	7	0	0	100	0	2
Iowa									
Davenport	52,469	0	1	0	0	-------	0	0	-------
Sioux City	76,411	0	0	0	0	-------	1	0	-------
Waterloo	36,771	3	1	0	0	-------	26	0	-------
Missouri									
Kansas City	367,481	1	4	2	2	2	4	2	6
St. Joseph	78,342	0	1	1	0	0	1	0	1
St. Louis	821,543	1	26	29	0	0	91	1	-------
North Dakota									
Fargo	26,403	0	0	1	0	0	2	3	0
Grand Forks	14,811	-------	0	-------	-------	-------	-------	-------	-------
South Dakota									
Aberdeen	15,036	0	0	0	0	-------	1	1	-------
Sioux Falls	30,127	-------	0	-------	-------	-------	-------	-------	-------
Nebraska									
Lincoln	60,941	3	1	0	0	0	2	1	0
Omaha	211,768	6	2	1	0	0	22	0	2
Kansas									
Topeka	55,411	6	1	2	0	0	3	0	0
Wichita	88,367	0	1	0	0	0	0	0	0
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	1	2	0	0	3	0	1
Maryland									
Baltimore	796,296	28	12	12	6	1	10	27	14
Cumberland	33,741	0	0	0	0	0	1	0	2
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia									
Washington	497,906	13	5	23	1	1	32	0	11
Virginia									
Lynchburg	30,395	1	0	1	0	0	14	0	0
Norfolk	(1)	4	0	0	0	0	8	0	4
Richmond	186,403	0	1	1	0	1	58	7	2
Roanoke	58,208	0	0	0	0	0	4	0	2
West Virginia									
Charleston	49,019	0	0	0	0	1	9	0	0
Huntington	63,485	-------	-------	-------	-------	-------	-------	-------	-------
Wheeling	56,208	5	0	0	0	0	22	0	0
North Carolina									
Raleigh	30,371	0	0	2	0	0	0	0	0
Wilmington	37,061	0	0	0	0	0	1	0	1
Winston-Salem	69,031	0	0	0	0	0	38	1	2
South Carolina									
Charleston	73,125	0	0	0	7	0	1	0	1
Columbia	41,225	0	0	1	0	0	0	0	0
Greenville	27,311	1	0	0	0	0	0	0	0
Georgia									
Atlanta	(1)	2	1	1	0	0	19	0	4
Brunswick	16,809	0	0	0	0	0	12	0	1
Savannah	93,134	0	1	1	0	0	0	0	0
Florida									
Miama	69,754	0	-------	2	0	0	3	0	1
Tampa	94,743	0	0	0	0	0	0	0	2

[1] No estimate made.

City reports for week ended July 3, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	------	1	------	------	------	------	------	------
Louisville	305,935	4	3	0	0	0	4	0	9
Tennessee									
Memphis	174,533	0	1	2	0	0	38	0	6
Nashville	136,220	0	0	2	0	0	0	0	3
Alabama									
Birmingham	205,670	5	1	0	0	0	35	1	3
Mobile	65,955	0	0	0	0	0	0	0	1
Montgomery	46,481	0	0	0	0	0	1	1	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	0	0	0	------	1	0	------
Little Rock	74,216	0	0	0	0	0	9	1	2
Louisiana									
New Orleans	414,493	0	5	4	2	2	0	0	2
Shreveport	57,857	0	0	0	0	0	1	0	3
Oklahoma									
Oklahoma City	(1)	0	0	0	0	0	2	0	1
Texas									
Dallas	194,450	3	2	4	0	1	0	1	4
Galveston	48,375	0	0	0	0	0	0	0	0
Houston	164,954	0	1	2	0	0	0	0	0
San Antonio	198,069	0	1	1	0	0	1	0	1
MOUNTAIN									
Montana									
Billings	17,971	------	0	0	0	0	1	------	1
Great Falls	29,883	3	0	1	0	0	15	0	1
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	0	0	0	0	0	0	1	0
Idaho									
Boise	23,042	0	1	0	0	0	0	0	0
Colorado									
Denver	280,911	15	9	4	------	1	18	0	1
Pueblo	43,787	3	1	8	0	0	12	0	1
New Mexico									
Albuquerque	21,000	0	0	1	0	0	0	0	0
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	1
Utah									
Salt Lake City	130,948	4	3	4	0	0	2	3	1
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	(1)	17	5	1	0	------	25	10	------
Spokane	108,897	10	2	2	0	------	53	0	------
Tacoma	104,455	6	2	2	0	0	5	0	3
Oregon:									
Portland	282,383	13	4	9	1	0	50	2	1
California:									
Los Angeles	(1)	18	35	33	3	1	16	10	7
Sacramento	72,260	0	2	2	0	0	0	2	1
San Francisco	557,530	8	16	8	0	0	72	4	1

[1] No estimate made.

City reports for week ended July 3, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine:											
Portland	1	1	0	0	0	1	1	2	0	3	22
New Hampshire											
Concord	0	2	0	0	0	0	0	0	0	0	11
Manchester	0	0	0	0	0	0	0	0	0	0	18
Vermont											
Barre	0	0	0	0	0	0	0	0	0	0	3
Massachusetts											
Boston	25	57	0	0	0	10	3	1	0	52	186
Fall River	1	5	0	0	0	2	3	0	0	1	33
Springfield	3	1	0	0	0	4	0	1	0	1	40
Worcester	4	2	0	0	0	4	0	0	0	2	37
Rhode Island											
Pawtucket	0	0	0	0	0	1	0	0	0	0	26
Providence	4	5	0	0	0	2	1	0	0	11	65
Connecticut											
Bridgeport	4	3	0	0	0	0	0	0	0	1	21
Hartford	3	0	0	0	0	0	1	0	0	1	21
New Haven	1	3	0	0	0	2	0	1	0	2	42
MIDDLE ATLANTIC											
New York											
Buffalo	13	10	0	0	0	8	0	0	0	19	130
New York	86	249	0	1	0	[1] 103	17	15	2	69	1,212
Rochester	7	5	0	0	0	5	0	0	0	5	56
Syracuse	5	1	0	0	0	3	1	0	0	23	43
New Jersey											
Camden	1	4	0	0	0	1	0	0	0	3	30
Newark	11	22	0	3	0	9	1	1	0	15	94
Trenton	1	1	0	0	0	5	0	2	1	5	38
Pennsylvania											
Philadelphia	39	60	0	0	0	30	5	4	0	44	443
Pittsburgh	13	15	0	0	0	8	2	1	0	85	164
Reading	1	5	0	0	0	0	1	0	0	6	28
EAST NORTH CENTRAL											
Ohio											
Cincinnati	5	9	1	1	0	8	1	1	0	7	120
Cleveland	11	44	2	1	0	13	2	3	0	70	165
Columbus	3	14	1	0	0	8	1	0	0	7	72
Toledo	9	7	1	0	0	8	1	0	0	45	64
Indiana											
Fort Wayne	1	5	1	1	0	0	0	0	0	1	15
Indianapolis	3	4	3	9	0	10	1	0	0	29	77
South Bend	1	1	0	1	0	1	1	0	0	0	13
Terre Haute	1	0	1	0	0	0	0	0	0	1	10
Illinois											
Chicago	50	79	2	2	0	46	3	1	0	49	621
Peoria	1	1	0	1	0	2	0	0	0	6	20
Springfield	1	3	0	0	0	0	0	0	0	8	11
Michigan											
Detroit	39	87	5	0	0	22	3	2	0	71	268
Flint	2	7	1	0	0	1	1	0	0	3	21
Grand Rapids	3	7	0	0	0	0	1	0	0	6	35
Wisconsin											
Kenosha	1	0	2	0	0	0	1	0	0	5	6
Madison	1	0	0	0	0	0	0	1	0	2	-------
Milwaukee	17	12	3	0	0	6	1	0	0	43	91
Racine	2	0	1	0	0	1	0	0	0	7	11
Superior	1	2	2	0	0	2	0	0	0	0	11

City reports for week ended July 3, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST NORTH CENTRAL											
Minnesota											
Duluth	2	20	3	0	0	0	0	0	0	2	10
Minneapolis	14	31	5	0	0	6	1	1	0	1	91
St Paul	9	14	2	1	0	1	0	0	0	27	51
Iowa											
Davenport	1	1	1	0			0	0		0	
Sioux City	1	3	2	6			0	0		0	0
Waterloo	1	0	1	0			0	0		7	
Missouri											
Kansas City	2	3	3	0	0	1	1	1	0	6	76
St Joseph	0	0	0	0	0	0	0	0	0	0	30
St Louis	12	42	1	2	0	9	3	1	0	39	234
North Dakota											
Fargo	0	3	0	0	0	1	0	0	0	0	5
Grand Forks	0		0				0				
South Dakota											
Aberdeen	1	2	1	0			0	0		3	
Sioux Falls	0		0				0				
Nebraska											
Lincoln	0	0	0	3	0	1	0	0	0	24	
Omaha	2	18	3	4	0	3	0	0	0	1	57
Kansas.											
Topeka	1	0	0	0	0	2	1	2	0	15	22
Wichita	1	0	3	0	0	4	1	0	0	5	35
SOUTH ATLANTIC											
Delaware											
Wilmington	2	3	0	0	0	1	0	2	0	2	24
Maryland											
Baltimore	11	14	0	0	0	18	4	3	2	53	199
Cumberland	1	0	0	0	0	1	0	0	0	0	13
Frederick	0	0	0	0	0	0	0	0	0	0	6
District of Col											
Washington	7	2	0	0	0	10	3	0	0	44	132
Virginia											
Lynchburg	0	2	0	0	0	1	0	0	0	8	13
Norfolk	0	3	1	1	0	1	2	0	0	47	
Richmond	1	7	0	1	0	3	1	2	0	3	49
Roanoke	0	0	0	1	0	3	0	0	0	0	25
West Virginia											
Charleston	1	1	0	0	0	2	1	0	0	6	19
Wheeling	1	0	0	0	0	0	1	0	0	0	14
North Carolina.											
Raleigh	0	0	0	0	0	1	0	0	0	8	8
Wilmington	0	0	0	0	0	0	0	0	0	9	11
Winston-Salem	0	1	1	0	0	1	2	1	0	0	23
South Carolina											
Charleston	0	0	0	1	0	4	2	3	0	0	23
Columbia	0	0	0	0	0	0	1	0	0	1	
Greenville	0	0	0	0	0	1	1	2	0	3	12
Georgia:											
Atlanta	2	2	5	0	0	6	3	4	2	3	75
Brunswick	0	0	0	0	0	2	0	0	0	0	4
Savannah	0	0	0	2	0	0	2	1	0	0	28
Florida											
Miami		0		0	0	2		1	1	5	24
St Petersburg	0		0			0	0	0		0	0
Tampa	0	0	0	0	0	2	0	1	0	0	29
EAST SOUTH CENTRAL											
Kentucky											
Covington	1		0				0				
Louisville	2	6	0	0	0	9	2	4	0	3	98
Tennessee											
Memphis	1	4	1	6	0	6	3	5	0	9	
Nashville	0	0	0	0	0	6	4	4	0	16	49
Alabama											
Birmingham	1	1	1	0	0	3	3	4	0	28	54
Mobile	0	0	1	0	0	1	1	5	0	1	29
Montgomery	1	1	0	1	0	0	1	1	0	0	18

City reports for week ended July 3, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	0	0	0	0			1	0	0	17	
Little Rock	0	1	0	0	0	3	1	1	0	0	
Louisiana											
New Orleans	2	4	1	0	0	20	5	0	0	12	136
Shreveport	0	2	0	0	0	2	2	0	0	0	23
Oklahoma											
Oklahoma	0	0	2	0	0	2	1	2	0	0	25
Texas											
Dallas	2	4	1	0	0	0	3	1	1	8	44
Galveston	1	0	0	3	0	2	1	0	0	0	17
Houston	1	2	0	2	0	0	2	0	0	0	37
San Antonio	1	1	1	0	0	5	1	1	1	0	54
MOUNTAIN											
Montana											
Billings	0	4	1	0	0	0	0	0	0		4
Great Falls	2	0	1	0	0	1	0	0	0	0	11
Helena	0	0	0	0	0	0	0	0	0	0	3
Missoula	0	0	0	0	0	0	0	0	0	0	9
Idaho											
Boise	0	0	0	3	0	0	0	0	0	0	6
Colorado											
Denver	6	5	0	0	0	10	1	0	0	21	71
Pueblo	1	1	0	1	0	1	0	3	0	0	7
New Mexico											
Albuquerque	0	1	0	0	0	6	0	0	0	2	16
Arizona											
Phoenix	0	0	0	0	0	5	0	0	0	0	18
Utah											
Salt Lake City	2	0	1	1	0	0	1	0	0	50	27
Nevada											
Reno	0	0	1	1	0	0	0	0	0	0	1
PACIFIC											
Washington											
Seattle	6	3	[illegible]	0			1	0		7	
Spokane	3	7	3	0			1	3		5	
Tacoma	1	5	2	7	0	0	0	0	0	1	19
Oregon											
Portland	5	8	5	24	0	3	0	2	1	2	74
California											
Los Angeles	12	30	2	0	0	33	3	2	0	13	232
Sacramento	1	1	0	0	0	2	1	3	0	0	26
San Francisco	9	10	1	0	0	11	1	0	0	2	155

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis (infantile paralysis): Cases	Poliomyelitis (infantile paralysis): Deaths
NEW ENGLAND									
Maine:									
Portland	1	0	0	0	0	0	0	0	0
Massachusetts:									
Boston	2	1	1	1	0	0	1	0	0
Springfield	1	1	0	1	0	0	0	0	0
Rhode Island:									
Providence	0	0	1	0	0	0	0	0	0
Connecticut									
New Haven	1	0	0	0	0	0	0	0	0

City reports for week ended July 3, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
MIDDLE ATLANTIC									
New York									
New York City	7	2	12	1	0	1	3	1	1
Pennsylvania [1]									
Philadelphia	0	0	0	0	0	0	0	0	10
EAST NORTH CENTRAL									
Ohio									
Cleveland	0	0	0	0	0	0	0	1	0
Toledo	0	1	0	0	0	0	0	0	0
Illinois									
Chicago	0	1	1	0	0	0	1	0	0
Michigan									
Detroit	3	1	0	0	0	0	0	1	0
Flint	0	0	0	0	0	0	0	1	0
Wisconsin									
Milwaukee	0	0	1	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota									
Minneapolis	1	1	0	0	0	0	0	0	0
Missouri									
St. Louis	1	1	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland									
Baltimore	0	0	0	0	1	0	1	0	0
District of Columbia									
Washington	0	1	0	0	0	0	0	0	0
Virginia									
Richmond	0	1	0	0	0	1	0	0	0
Roanoke	0	0	0	0	0	0	0	0	1
North Carolina									
Raleigh	0	0	0	0	0	1	0	0	0
Wilmington	0	0	0	0	0	1	0	0	0
Winston-Salem	0	0	0	0	1	1	0	0	0
South Carolina									
Charleston [2]	0	0	0	0	2	0	0	0	0
Greenville	0	1	0	0	0	0	0	0	0
Georgia									
Atlanta	0	0	0	0	0	1	0	0	0
EAST SOUTH CENTRAL									
Tennessee									
Memphis	0	0	0	0	2	1	0	0	0
Alabama									
Mobile	0	0	0	0	0	2	0	0	0
Montgomery	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	2	0	0	0
Louisiana									
New Orleans	0	0	3	2	0	0	1	0	0
Texas									
Dallas	0	0	0	0	0	0	0	3	3
Houston	0	0	0	0	1	1	0	1	0
San Antonio	0	0	0	0	0	1	0	1	2
PACIFIC									
Washington									
Seattle	1	0	0	0	0	0	0	0	0
California									
Los Angeles	1	0	0	0	0	0	1	1	0
Sacramento	0	0	0	0	0	0	0	1	1

[1] Rabies in man—1 death at Pittsburgh, Pa.
[2] Dengue—1 case, Charleston, S. C.

The following table gives the rates per 100,000 population for 103 cities for the five-week period ended July 3, 1926, compared with those for a like period ended July 4, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 103 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, May 31 to July 3, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926
103 cities	[2] 152	[3] 117	116	[3] 136	114	[3] 113	112	[3] 131	[4] 92	[5] 122
New England	125	78	91	69	93	78	122	59	113	64
Middle Atlantic	243	134	155	155	106	124	163	152	95	163
East North Central	92	119	89	146	86	131	78	161	81	117
West North Central	183	[3] 207	141	[3] 231	129	[3] 167	111	[3] 195	127	[6] 125
South Atlantic	[2] 88	47	54	60	48	68	69	45	38	83
East South Central	11	16	11	26	5	16	32	10	5	[7] 22
West South Central	40	56	66	47	70	43	44	43	57	47
Mountain	74	109	176	127	185	146	102	118	176	155
Pacific	138	132	157	159	108	102	102	132	[4] 138	129

MEASLES CASE RATES

	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926
103 cities	[2] 594	[3] 1,014	558	[3] 928	416	[3] 734	292	[3] 617	[4] 225	[5] 435
New England	841	728	860	659	611	494	393	425	338	319
Middle Atlantic	771	751	724	707	542	585	380	476	257	313
East North Central	825	1,103	779	1,018	547	943	377	828	300	634
West North Central	111	[3] 2,209	131	[3] 2,038	84	[3] 1,260	58	[3] 935	30	[6] 604
South Atlantic	[2] 393	1,213	280	1,103	330	825	263	701	248	436
East South Central	121	1,660	194	1,396	105	695	121	612	89	[7] 430
West South Central	22	86	13	125	18	77	4	95	4	52
Mountain	37	1,247	92	919	74	701	92	792	37	437
Pacific	157	696	83	593	80	552	50	485	[4] 35	461

SCARLET FEVER CASE RATES

	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926
103 cities	[2] 256	[3] 231	170	[3] 261	159	[3] 233	113	[3] 212	[4] 95	[5] 170
New England	256	248	173	255	137	203	103	236	108	187
Middle Atlantic	262	209	155	195	144	221	99	210	79	188
East North Central	293	247	198	333	202	340	146	253	114	187
West North Central	466	[3] 416	315	[3] 621	317	[3] 480	179	[3] 354	163	[6] 270
South Atlantic	[2] 125	190	58	160	58	131	42	152	56	66
East South Central	116	195	147	78	147	47	84	47	68	[7] 66
West South Central	84	163	44	86	35	69	53	30	44	60
Mountain	324	218	268	118	139	127	203	118	102	91
Pacific	144	170	155	237	110	216	102	159	[4] 67	151

[1] The figures given in this table are rates per 100,000 population, annual basis—and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively

[2] Wilmington, N C., not included.

[3] Grand Forks, N Dak., not included

[4] Spokane, Wash, not included

[5] Grand Forks, N Dak., Sioux Falls, S Dak, and Covington, Ky., not included.

[6] Grand Forks, N. Dak., and Sioux Falls, S. Dak, not included

[7] Covington, Ky., not included.

Summary of weekly reports from cities, May 31 to July 3, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925— Continued

SMALLPOX CASE RATES

	Week ended—									
	June 6, 1925	June 5, 1926	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926
103 cities	[2] 45	[3] 15	36	[3] 16	35	[3] 11	24	[3] 16	[4] 14	[5] 11
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	4	0	2	0	1	0	0	0	1	2
East North Central	61	9	40	12	42	10	19	14	13	10
West North Central	92	[3] 40	50	[3] 28	58	[3] 32	36	[3] 44	16	[6] 26
South Atlantic	[2] 37	34	21	38	29	30	13	26	10	11
East South Central	105	83	273	52	184	10	121	88	58	[7] 39
West South Central	31	43	4	34	18	26	0	17	4	22
Mountain	37	27	28	46	18	27	28	18	28	55
Pacific	182	24	141	51	146	24	163	32	[4] 85	19

TYPHOID FEVER CASE RATES

103 cities	[2] 24	[3] 9	27	[3] 12	21	[3] 11	25	[3] 12	[4] 35	[5] 17
New England	29	0	24	17	19	19	17	9	22	12
Middle Atlantic	26	9	17	6	14	9	18	10	15	11
East North Central	9	5	9	4	6	4	8	4	10	5
West North Central	8	[3] 8	24	[3] 6	12	[3] 10	10	[3] 4	20	[6] 10
South Atlantic	[2] 39	32	61	26	46	28	67	30	65	36
East South Central	37	10	110	57	74	21	84	36	184	[7] 127
West South Central	84	9	110	52	123	30	128	30	233	13
Mountain	74	9	46	9	37	0	0	0	9	27
Pacific	8	8	14	13	6	8	19	16	[4] 21	22

INFLUENZA DEATH RATES

96 cities	[2] 10	8	7	10	6	7	6	5	4	[8] 6
New England	2	2	5	12	2	9	7	0	2	5
Middle Atlantic	11	6	6	9	4	9	6	6	2	7
East North Central	10	8	6	10	7	3	6	3	5	5
West North Central	4	8	8	4	6	4	4	6	0	[9] 8
South Atlantic	[2] 6	8	4	6	6	4	2	6	6	8
East South Central	47	36	16	36	32	16	16	5	11	[7] 0
West South Central	5	14	19	19	10	24	10	24	10	14
Mountain	28	18	9	9	0	0	9	0	0	9
Pacific	11	4	4	0	4	4	4	0	4	4

PNEUMONIA DEATH RATES

96 cities	[2] 123	[10] 105	99	95	78	87	65	74	56	[8] 75
New England	69	116	113	102	60	87	58	69	46	92
Middle Atlantic	167	130	130	109	93	95	75	83	61	90
East North Central	107	98	79	87	76	74	45	61	42	61
West North Central	55	50	57	58	32	75	51	44	40	[9] 38
South Atlantic	[2] 138	[10] 80	115	96	75	111	90	94	71	88
East South Central	116	125	58	125	95	99	110	125	89	[7] 121
West South Central	63	99	82	94	87	71	73	78	58	57
Mountain	92	146	102	82	139	100	55	109	65	46
Pacific	116	67	44	67	58	75	47	43	73	43

[2] Wilmington, N. C., not included.
[3] Grand Forks, N. Dak., not included.
[4] Spokane, Wash., not included.
[5] Grand Forks, N. Dak., Sioux Falls, S. Dak., and Covington, Ky., not included.
[6] Grand Forks, N. Dak., and Sioux Falls, S. Dak., not included.
[7] Covington, Ky., not included.
[8] Sioux Falls, S. Dak., and Covington, Ky., not included.
[9] Sioux Falls, S. Dak., not included.
[10] Charleston, W. Va., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	103	96	29,944,996	30,473,129	29,251,658	29,764,201
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	14	11	2,594,962	2,634,662	2,461,390	2,499,036
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended June 19, 1926.—The following report for the week ended June 19, 1926, was transmitted by the Far Eastern Bureau of the Health Section of the League of Nations' Secretariat, located at Singapore, to the headquarters at Geneva.

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Iraq Basra	0	0	0	0	2	2
Ceylon Colombo	0	0	0	0	1	0
British India						
Bombay	----	0	----	0	29	22
Madras	----	0	----	0	1	1
Rangoon	----	2	----	9	0	0
Karachi	----	1	----	0	9	3
Negapatam	----	0	----	0	1	1
Dutch East Indies						
Surabaja	1	1	0	0	0	0
Siam: Bangkok	1	1	86	46	3	3

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
French Indo-China						
Saigon and Cholon	4	3	13	10	0	0
Haiphong	0	0	57	56	0	0
China Amoy	12	----	0	0	1	0
Japan						
Osaka	0	0	0	0	3	0
Kwantung						
Dairen	0	0	0	0	4	1
Port Arthur	0	0	0	0	6	2
Madagascar						
Majunga	5	2	0	0	0	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

British India.—Chittagong, Cochin, Tuticorin, Vizagapatam

Federated Malay States.—Port Swettenham.

Straits Settlements.—Penang, Singapore

Dutch East Indies.—Batavia, Samarang, Cheribon, Belawan Deli, Palembang, Sabang, Macassar, Menado, Balik-Papan, Padang

Sarawak Kuching.

British North Borneo.—Sandakan

Portuguese Timor.—Dilly

Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.

French Indo-China.—Turane

China.—Shanghai, Hong Kong.

Formosa.—Keelung.

Japan.—Nagasaki, Yokohama, Moji, Kobe, Niigata, Tsuruga, Hakodate, Shimonoseki.

Korea.—Chemulpo, Fusan.

Manchuria.—Antung, Mukden, Changchun, Harbin.

U. S. S. R.—*Vladivostok*.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.
New Guinea—Port Moresby
New Zealand—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia.—Noumea
Hawaii—Honolulu.

AFRICA

Egypt.—Alexandria, Port Said, Suez.
Anglo-Egyptian Sudan—Port Sudan.
Eritrea—Massaua.
French Somaliland—Jibuti.
British Somaliland—Berbera
Italian Somaliland—Magadiscio.
Kenya—Mombasa
Zanzibar.—Zanzibar
Tanganyika.—Dar-es-Salaam.
Seychelles—Victoria
Madagascar—Tamatave
Portuquese East Africa—Mozambique, Beira, Lorenço Marques.
Union of South Africa—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from:

British India—Calcutta
Dutch East Indies—Banjermasin, Tarakan, Pontianak.
Mauritius.—Port Louis

SMALLPOX ON VESSEL

At Aden, Arabia.—Under date of June 12, 1926, four cases of smallpox with one fatality were reported at Aden, Arabia. The cases were stated to have been imported by sea.

BRAZIL

Mortality—Smallpox—Disease prevalence—Manaos—April, 1926.—During the month of April, 1926, 156 deaths from all causes were reported at Manaos, Brazil including measles 1 death, smallpox 5, tuberculosis 22, bronchial affections 6, intestinal disease 25, and malaria 25 deaths.

Yellow fever.—Information received under date of June 26, 1926, relative to the yellow fever situation in Brazil states that there were no reported cases in any of the large coast cities, and that the water fronts were safe. Cases of yellow fever were reported from various places in the interior of Bahia, Pirapora, and Minas. Mosquito indices appeared to be safe except at Maranhao.

CANADA

Communicable diseases—Province of Ontario—April 26–May 29, 1926—Comparative.—During the period April 26 to May 29, 1926, communicable diseases were reported in the Province of Ontario, as follows:

Disease	1926		1925	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis				3
Chancroid	1			
Chicken pox	423		363	
Diphtheria	145	8	193	10
German measles	690		21	
Gonorrhea	117		215	
Influenza		30		28
Lethargic encephalitis		2		2
Measles	2,962	2	2,152	
Mumps	157		478	
Pneumonia		232		108
Poliomyelitis	1		5	2
Scarlet fever	501	6	507	6
Septic sore throat			2	
Smallpox	51	1	16	1
Syphilis	133		177	
Tuberculosis	201	84	209	92
Typhoid fever	32		53	9
Whooping cough	321	10	400	11

Smallpox.—Smallpox was reported at 16 localities, with the greatest number of cases, viz, 10, at Pakenham. At Orillia and Toronto 7 cases each were reported; at Waterloo, 6 cases, at Sarnia 4 cases, at Kitchener 3 with 1 death.

EGYPT

Plague—June 4–10, 1926—Summary.—During the week ended June 10, 1926, 5 cases of plague were reported in Egypt, making a total from January 1 to June 10, 1926, of 56 cases of plague, as compared with 64 cases reported during the corresponding period of the preceding year. Of the 5 cases reported for the week ended June 10, 2 cases occurred at Suez.

ESTHONIA

Communicable diseases—May, 1926.—During the month of May, 1926, communicable diseases were reported in the Republic of Esthonia, as follows:

Disease	Cases	Disease	Cases
Diphtheria	23	Scarlet fever	121
Leprosy	2	Smallpox	1
Measles	987	Tuberculosis	172
Paratyphoid fever	2	Typhoid fever	27

Population, 1,107,059.

JAMAICA

Smallpox (reported as alastrim)—May 30–June 26, 1926.—During the four-week period ended June 26, 1926, 99 cases of smallpox (alastrim) were reported in the island of Jamaica exclusive of Kingston No cases of alastrim were reported at Kingston.

Other diseases—Prevalence of other diseases was reported as follows: *Measles*—general, four cases; Kingston, 23 cases; *tuberculosis*, pulmonary, general, 44 cases; Kingston, 10 cases; *typhoid fever*, general, 43 cases; Kingston, 9 cases; *whooping cough*, general, 222 cases Population, estimated, 1921, 858,118, population of Kingston, 62,707.

MEXICO

Mortality—Communicable disease prevalence—Durango—June, 1926.—During the month of June, 1926, four deaths from tuberculosis, all forms, and four from typhoid fever were reported at Durango, Mexico Population, estimated, 35,000. Typhoid fever and paratyphoid were stated to be endemic. The prevailing diseases in the city and vicinity during the month of June, 1926, were stated to be dysentery, tuberculosis, typhoid fever, and whooping cough.

SALVADOR

Mortality—Communicable diseases—San Salvador—April, 1926.—During the month of April, 1926, 53 deaths from all causes, were reported at San Salvador, Republic of Salvador, including gastroenteritis 23 deaths, measles 6, tuberculosis 23, and typhoid fever 1 death. Population, 83,000.

Republic of Salvador—Mortality—Malaria.—During April, 1926, 2,710 deaths from all causes were reported in the Republic of Salvador. Population, 1,500,000 Malarial and related fevers were stated to be the prevailing diseases in the country.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended July 23, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
India				May 16-22, 1926 Cases, 2,174; deaths, 1,294
Calcutta	May 23-29	58	39	
Rangoon	May 30-June 5	5	3	
Indo-China.				
Saigon	May 22-June 5	22	21	Stated to be for Saigon
Siam.				
Bangkok	May 23-29	219	118	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended July 23, 1926—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
China:				
Amoy	May 30-June 12	19		Deaths not reported
Egypt				June 4-10, 1926 Cases, 5 Total, Jan 1-June 10, 1926, 56, corresponding period, preceding year 64 cases
India				May 8-15, 1926 Cases, 10,356, deaths, 7,466 May 16-22, 1926 Cases, 8,194, deaths, 6,423
Bombay	May 23-29	2	2	
Karachi	June 6-12	6	5	
Madras Presidency	May 16-22	12	6	
Rangoon	May 30-June 5	2	2	
Indo-China				
Saigon	May 23-June 5	3	1	Stated to be for Saigon
Java				
Batavia	May 22-28	8	8	
Siam.				
Bangkok	May 23-29	1	1	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 1-10	6		
Brazil				
Manaos	Apr 1-30		5	
Para	May 30-June 19	14	14	
Rio de Janeiro	May 23-June 5	26	31	
Canada				
Manitoba—				
Winnipeg	July 4-10	3		
Ontario—				
Kitchener	Apr 26-May 29	3	1	
Orillia	do	7		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
China				
Amoy	May 30-June 12	3		
Antung	May 31-June 13	2		
Chungking	June 6-12			Present.
Foochow	May 23-29			Do
Hongkong	May 16-22	7	4	
Manchuria—				
An-shan	June 6-12	3		South Manchuria Ry
Harbin	do	2		Do
Kai-yuan	do	1		Do
Liao-yang	do	1		Do
Mukden	do	1		Do
Supingkai	do	1		Do
Shanghai	May 23-29	2		Deaths in Chinese and foreign population, international and French
Swatow	May 30-June 5			Present in sporadic form
Chosen				
Fusan	May 1-31	1		
Seishin	do	2	1	
Egypt				
Alexandria	May 29-June 10	7	2	
Esthonia				May 1-31, 1926 Cases, 1.
France				
St Etienne	June 9-15	2		
Great Britain				
England—				
Nottingham	May 2-22	6		
India				May 16-22, 1926 Cases, 7,110; deaths, 1,834.
Bombay	May 23-29	26	15	
Calcutta	do	6	2	
Karachi	June 6-12	7	4	
Madras	do	1		
Rangoon	May 30-June 5	1	1	
Jamaica				May 30-June 26, 1926 Cases, 99 (reported as alastrim).
Java				
East Java and Madoera	May 9-15	10	1	
Mexico.				
Guadalajara	June 29-July 5		1	
Torreon	June 1-30		7	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended July 23, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Portugal				
Lisbon	May 30-June 19	10		
Siam				
Bangkok	May 23-29	7	3	
Union of South Africa				
Cape Province—				
Idutywa District	do			Outbreaks
On vessels				Three cases, with one death, at Aden, Arabia, stated to have been imported by sea

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 1-10	3		
Chosen				
Chemulpo	May 1-31	28	1	
Poland				May 9-15, 1926 Cases, 101, deaths, 5 In District of Lwow
Tunisia				
Tunis	June 11-20	2		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 23-29	1	1	

Reports Received from June 26 to July 16, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 1, 1926 Cases, 30, deaths, 24
French Settlements in India				Mar 7-Apr 10, 1926 Cases, 13, deaths, 13.
India				Apr 25-May 15, 1926. Cases, 8,368, deaths, 5,146
Calcutta	Apr 4-May 22	420	379	
Madras	May 16-June 5	2	1	
Rangoon	May 9-29	18	13	
Indo-China				
Saigon	May 2-15	52	48	
Philippine Islands				
Manila	May 18-24	2	2	
Provinces—				
Albay	Apr. 18-24	1	1	
Mindoro	Feb 21-27	1	1	
Siam.				
Bangkok	May 2-22	844	568	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Azores				
St. Michaels:				
Arrifes	May 9-15	1		
Livramente	May 15-29	2	1	
China:				
Amoy	Apr 18-May 29		30	Quite prevalent
Nanking	May 9-June 5			Prevalent.
Ecuador				
Guayaquil	May 16-June 15	5		Rats taken, 20,877, found infected, 18

[1] From medical officers of the Public Health Service; American consuls, and other sources. For reports received from Dec. 26, 1925, to June 25, 1926, see Public Health Reports for June 25, 1926. The tables of epidemic diseases are terminated semiannually and new tables begun.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 16, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Egypt				May 21-June 3, 1926 Cases, 12 Jan 1-June 3, 1926 Cases, 51.
City—				
Suez	May 21-June 3	4	3	
Province—				
Beni-Suef	May 28-June 8	8	2	
Gharbieh	June 2	1	1	
Greece				
Athens	Apr 1-30	7	2	Including Piraeus
Do	May 1-31	9	2	Do
Patras	May 27	2	1	
Zante	May 17	1		
India				Apr 25-May 8, 1926 Cases, 20,330, deaths, 16,240
Bombay	May 2-22	9	9	
Karachi	May 23-June 5	4	4	
Madras Presidency	Apr 25-May 15	37	35	
Rangoon	May 9-29	5	4	
Iraq				
Bagdad	Apr 18-May 15	107	61	
Japan				
Yokohama	Reported July 6		3	
Java.				
Batavia	Apr 24-May 21	39	39	
Cheribon	Apr 11-24	3	3	
Madagascar				Apr 1-15, 1926 Cases, 42, deaths, 39
Moramanga Province	Apr. 1-15	2	2	Septicemic
Tananarive Province—				
Tananarive Town	do	3	3	Pneumonic and septicemic
Other localities	do	37	34	Bubonic, pneumonic, septicemic.
Nigeria				Feb 1-Mar 31, 1926 Cases, 81, deaths, 62
Peru				May, 1926 Cases, 23, deaths, 10.
Departments—				
Ancash	May 1-31			Present.
Cajamarca	do			Do.
Ica	do	1		
Libertad	do	4		Pacasmayo, cases, 2; Trujillo district, cases, 2
Lima	do	18	10	Lima City, 1 case, country estates, 1
Russia				Jan 19-Feb 25, 1926 Cases, 7.
Senegal				Nov 1-30, 1926 Cases, 3, deaths, 2.
Straits Settlements				
Singapore	May 2-8	1	1	
Tunisia.				
Kairouan	June 9	8		9 cases 30 miles south of Kairouan.
Union of South Africa				
Cape Province	May 9-22	5	3	
Orange Free State—				
Hoopstad District—				
Protestpan	May 9-22	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-31	4		
Brazil				
Para	May 16-29	6	7	
Rio de Janeiro	May 2-22	76	24	
Santos	Mar. 1-7		1	
Canada				May 30-June 12, 1926. Cases, 46.
Alberta	May 30-June 12	3		
Manitoba	May 30-June 26	24		
Winnipeg	June 6-12	5	1	
Ontario				May 30-June 26, 1926. Cases, 36.
Kingston	May 23-June 26	5		
North Bay	May 2-22	5		
Saskatchewan				May 30-June 19, 1926. Cases, 16.
Chile				
Antofagasta	June 6-12	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 16, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China:				
Amoy	May 1-29		8	
Chungking	May 2-29			Present
Foochow	May 9-22			Do
Hongkong	May 2-15	4	3	
Manchuria—				
An-shan	May 16-June 5	2		South Manchuria Railway.
Antung	May 16-22	2		Do
Changchun	May 16-June 5	7		Do
Dairen	Apr 26-May 9	31	6	Do
Fushun	do	3		Do
Harbin	May 14-27	14		
Kai-yuan	do	1		Do
Liao-yang	do	2		Do
Mukden	do	1		Do
Penhsihu	do	2		Do
Teshihchiao	do	1		Do
Wa-feng-tien	do	3		Do
Nanking	May 8-June 5			Present
Shanghai	May 2-22	7	24	Cases foreign Deaths, population of international concession, foreign and native
Swatow	May 9-29			Sporadic
Wanshein	May 1			Present among troops
Egypt				
Alexandria	May 15-21	5		
France	Mar 1-31	68		
French settlements in India	Mar 7-Apr 10	127	127	
Great Britain				
England—				
Bradford	May 23-29	1		
Newcastle-on-Tyne	June 6-12	1		
Nottingham	May 30-June 5	1		
Sheffield	June 13-19	1		
India				Apr 25-May 15, 1926. Cases, 20,853, deaths, 5,330
Bombay	May 2-22	83	48	
Calcutta	Apr 4-22	165	150	
Karachi	May 16-June 5	29	10	
Madras	May 16-29	5	3	
Rangoon	May 9-29	6	2	
Indo-China				
Saigon	May 9-15	1		
Iraq				
Bagdad	May 9-29	3		
Basra	Apr 18-May 22	20	13	
Italy				Mar. 28-Apr. 17, 1926 Cases, 10.
Japan				
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Taiwan Island	May 11-20	24		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-21	1		Province
East Java and Madoera	Apr 11-May 8	16	1	
Malang	Apr 4-10	6	1	Interior
Latvia				Apr. 1-30, 1926 Cases, 3.
Mexico				
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
San Antonio de Arenales	Jan 1-June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Tampico	June 1-10		2	
Torreon	May 1-31		10	
Nigeria				Feb 1-Mar 31, 1926 Cases, 270 deaths, 12
Poland				Mar 28-May 1, 1926 Cases, 12; deaths, 1
Portugal:				
Lisbon	Apr 26-May 23		3	
Oporto	May 23-June 5	4		
Russia				Jan 1-31, 1926 Cases, 492
Siam:				
Bangkok	May 2-22	8	8	
Straits Settlements				
Singapore	Apr 25-May 1	1		
Tunisia				Apr 1-May 10, 1926. Cases, 6
Union of South Africa:				
Transvaal—				
Johannesburg	May 9-15	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 16, 1926—Continued

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	May 21-31	2	1	
Chile				
Antofagasta	May 23-29	3		
Valparaiso	Apr 29-May 5		1	
China				
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen	Feb 1-28	228	18	
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30-June 5	1		
Cork	June 5	1		
Italy				Mar 28-Apr 17, 1926 Cases, 2
Japan				Mar 28-Apr 10, 1926 Cases, 15.
Lithuania				Mar 1-31, 1926 Cases, 38, deaths, 5
Mexico:				
Mexico City	May 16-June 5	20		Including municipalities in Federal District
Do	June 13-19	9		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-31, 1926 Cases, 140
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-May 8, 1926 Cases, 680, deaths, 55
Rumania				Mar 1-31, 1926 Cases, 41
Russia				Jan 1-31, 1926 Cases, 2,956.
Tunisia				Apr 1-May 10, 1926 Cases, 64.
Union of South Africa				April, 1926 Cases, 85, deaths, 14 (colored), European, 2 cases: Total, 87 cases, 14 deaths
Cape Province				Apr 1-30, 1926 Cases, 71, deaths, 11 Native
Do	May 9-15			Outbreaks.
Grahamstown	do	1		Sporadic
Natal				Apr 1-30, 1926 Cases, 4 Native
Orange Free State				Apr 1-30, 1926 Cases, 7 Native
Transvaal				Apr 1-30, 1926 Cases, 3, deaths, 3. Native.
Yugoslavia				
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil				
Bahia	May 9-22	3	2	

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TREASURY DEPARTMENT

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SPECIAL ARTICLES

Achievements of the National Health Service of Chile

Committee Report on Uniform Standard Milk Ordinance

National Program for the Unification of Milk Control

Revised Public Health Service Standard Milk Ordinance

WASHINGTON
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1926

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen B J LLOYD, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912

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PUBLIC HEALTH REPORTS

VOL. 41 JULY 30, 1926 NO. 31

THE NATIONAL HEALTH SERVICE OF CHILE

A Brief Synopsis of the Achievements of the Service During the Year Ended July 1, 1926

By JOHN D LONG, Technical Adviser, Ministry of Hygiene, Chile, Surgeon, United States Public Health Service

In accordance with a decree law dictated by the first "Junta de Gobierno" (Decree Law No 44), the Chilean National Health Service has been completely reorganized The following synopsis of achievements during the past year will give a general conception of the present status of the health service and a glimpse into its future possibilities:

1 Constitutional guaranties (art 10, pars 10 and 14, Chilean constitution)

2 The National Sanitary Code, approved October 13, 1925, which includes the ratification of the Pan American Sanitary Code (an international sanitary treaty) and a chapter on foods and drugs.

3. Frontier and maritime quarantine regulations

4. Regulations for the control of the importation and sale of opium, cocaine, and their derivatives.

5 Regulations relative to the practice of medicine and the other healing arts.

6 Regulations relative to the control of prostitution.

7. Regulations for the administration of the headquarters office of the health service

8. Graphic chart of the health service organization.

9 Graphic chart of the functions and duties of the officials and employees.

10 Physical examination blank and regulations relative to the periodic physical examination of all school children.

11. Regulations relative to sewage disposal in small towns, villages, and small districts

12. Regulations relative to pharmacies and drug stores

13. A model municipal sanitary code to be utilized by cities, towns, and villages in the preparation and drafting of sanitary ordinances and regulations.

14. A school for the instruction of visiting public health nurses, and a course of instruction for sanitary inspectors.

15. A model sanitary latrine, for use in small towns and rural districts where public sewer systems do not exist, for the prevention of the contamination of the soil, of surface waters, and of wells that supply water for domestic use.

16. There has been devised and plans are now being prepared for a sanitary type of house or home which can be quickly constructed of native materials at a relatively small cost.

17 A sanitary type of well has been devised for supplying reasonably safe water for domestic use in small towns or rural districts where public water supplies are not available

18 Numerous public addresses on public health have been delivered in a number of different cities. Intense interest has been manifested on all occasions

19. Public interest in improving sanitary conditions and in reducing morbidity and mortality has been apparently thoroughly aroused, as evidenced by letters received and numerous personal visists and interviews, as well as by sanitary improvements that are being voluntarily made

20 Fly extermination campaigns have been carried on with quite appreciable reductions in death rates, especially in the infant mortality.

21 Eleven boards of health have been organized in an equal number of cities and are now functioning

22 Ten sanitary zones, comprising the entire Republic, have been formed

23. The sanitary zones have been subdivided into 83 sanitary divisions; a considerable number are now functioning and the remainder will be soon.

24. Officials and employees have been physically examined and placed in the new organization or recommended for retirement, in accordance with the circumstances in each case

25. Appointments have all been approved by the President and the Minister of Hygiene, but not by the Minister of the Treasury, except in a few instances.

26 Officials and employees have been assigned, and the majority have gone, to their various posts or stations and are actually functioning.

27 The appropriation law for 1926, has been drafted and presented to the Minister of Hygiene

28. The principal points to be considered in the appropriation law for 1927, have been indicated.

29. A study of the principal sanitary problems of the country has been made, and their solutions have been indicated.

30. Widespread public interest has been aroused in the improvement of public water supplies, and a number of cities are insisting upon improvements in existing supplies.

From the above it may be seen that Chile now has a complete modern health organization based upon national and international needs and obligations.

With sufficient funds, reasonable freedom of action, full time health officials, and a reasonable amount of study of problems and application of the measures indicated, results should be equal to those obtained in other countries, some of them not so favorably situated as Chile, that have applied the same principles with entirely satisfactory results in the reduction of morbidity and mortality and the prolongation of the average expectancy of life.

REPORT OF THE COMMITTEE ON UNIFORM STANDARD MILK ORDINANCE, CONFERENCE OF STATE AND TERRITORIAL HEALTH OFFICERS, 1926

Your committee, appointed by resolution of the 1925 Conference of State and Territorial Health Officers, was instructed "To make a careful study of the milk ordinance which has been adopted as standard by eight States, and to submit a report to the 1926 conference as to whether this ordinance or any modification thereof is suitable for general adoption by the State health officers of the United States"

In presenting its report your committee believes that attention should first be given to the theoretical considerations underlying the need for a standard milk ordinance, and the general principles upon which its construction should be based.

It wishes to include as an appendix to its report, therefore, a paper by Sanitary Engineer Leslie C. Frank, of the United States Public Health Service, which discusses these questions thoroughly.[1]

Your committee is in accord with the general conclusions reached in that paper, namely—

(1) That a uniform standard ordinance is vitally necessary in order to increase the general level of milk quality and safety in the United States, in order to elicit the cooperation of the dairy industry, and in order to promote a greater milk consumption.

(2) That proper criteria for an effective standard milk ordinance are—

(a) It must be designed to effect the maximum percentage of pasteurization which each city will support.

(b) It must improve as rapidly and as much as possible the quality of the milk before pasteurization.

(c) It must improve as rapidly and as much as possible the quality of any portion of the milk which remains unpasteurized.

(d) It must encourage greater milk consumption.

(e) It must elicit the cooperation of the dairy industry.

(f) It must be so framed as to be likely to be enacted by both small and large cities; cities with little or no previous milk control, and cities with long experience in milk control; cities with a majority sentiment in favor of pasteurization, and cities with a majority sentiment opposed to pasteurization.

(g) It must therefore be so designed as not to exclude the many cities which can not be induced to enact a universal pasteurization ordinance and the many cities which can not be induced to enact an ordinance which limits the sale of milk to the highest ideal grade.

[1] A National Program for the Unification of Milk Control, p 1583, of this issue

(3) That in order to satisfy all of these conditions the ordinance must be of the multiple grading type, providing a number of grades of both raw and pasteurized milk.

(4) That the grades of milk to be provided for in the Standard Milk Ordinance should be—

(a) *Grade "A" pasteurized milk.*—This grade should be milk which has been produced in a cleanly manner and under all major safety precautions, and which has been properly pasteurized in a properly designed and properly operated plant.

(b) *Grade "B" pasteurized milk*—This grade of milk should be milk in the production of which certain items, such as tuberculin testing of cows or health examination of employees, may not have been applied, but which has been produced in a cleanly manner, and which has been properly pasteurized in a plant in which only minor items of sanitation may have been found to be violated.

(c) *Grade "C" pasteurized milk.*—This grade should comprise all pasteurized milk not complying with either grade "A" or grade "B" pasteurized requirements.

(d) *Grade "A" raw milk.*—This grade of raw milk should be the highest which it is practicable to produce. It should meet certain production refinements, such as a very low bacterial count, a very low cooling temperature, and certain structural details which most authorities believe can not be practicably required of grade "A" pasteurized milk.

(e) Finally, the grades of raw milk used for each of the three grades of pasteurized milk should be defined in the ordinance.

(5) That any grade of raw milk, however carefully produced, is made still safer by pasteurization.

(6) That the highest grade of pasteurized milk should place ample emphasis upon proper production methods as well as proper pasteurization methods.

(7) That each city should be encouraged to require the maximum percentage of pasteurization which its citizens will support.

(8) That cities which feel that all of their milk supplies can be required to comply with all of the items of sanitation for the highest grade of milk defined in the ordinance, namely, grade "A" pasteurized, may limit the sale of milk to that one grade.

(9) That cities which feel they can not require all of their milk supplies to equal grade 'A' quality should be permitted to sanction the sale of the other grades defined in the ordinance, but should be urged to inform their citizens that grade 'A' pasteurized milk is the safest milk, by placards in all restaurants, soda fountains, etc., where milk is sold, and by other means.

Your committee believes that the Standard Milk Ordinance tentatively proposed by the United States Public Health Service [2] and now adopted as standard by 10 States, admirably satisfies in general the above requirements.

Believing that the States which are actually applying this ordinance should be well qualified to render judgment as to the effect of its application, your committee has made inquiries of each of these States concerning the effect of the operation of the ordinance.

The three States which feel they have been applying the Public Health Service Standard Milk Ordinance long enough to justify conclusions are North Carolina, Texas, and Alabama

North Carolina and Alabama have now been applying this ordinance for about three years, and Texas has been applying it for about two and one-half years In these three States over 60 cities are now operating under the ordinance Each of the States reports to your committee that its experience with the operation of the ordinance is satisfactory, and none of them suggests modification, except that Texas suggests that it would like it to be made more adaptable to its "smaller communities which are without laboratories and from which it will not always be practicable to ship samples of milk to central laboratories."

The State which has been operating longest under the Standard Milk Ordinance is Alabama, and that State reports that following the application of the Standard Ordinance in eight of its cities the results described below have been noted.

(1) The enforcement of the Public Health Service Standard Milk Ordinance has been followed by a greatly improved milk sanitation

Table 1 shows the increase in the general milk sanitation ratings (on the basis of the Public Health Service rating plan) of eight Alabama cities which have now been operating under the Standard Milk Ordinance long enough to make it possible to measure results.

TABLE 1.—*United States Public Health Service milk sanitation ratings (general)*

City	Preenforcement		Postenforcement		Per cent increase
	Date	Rating	Date	Rating	
Montgomery	January, 1923	35 6	December, 1925	59 1	66 0
Florence	March, 1924	24 5	do	48.8	99 2
Selma	do	29 1	do	47 8	64 3
Tuscaloosa	do	29 7	do	62 7	111 1
Mobile	September, 1923	27 1	do	48 2	77 8
Huntsville	March 1924	27 0	do	67 1	148 5
Gadsden	January 1924	28 5	do	47 1	65 3
Albany-Decatur	March, 1925	8 1	do	73 3	805 0
Averages (weighted) [a]		29 2		54 2	85.6

[a] Weighted on gallonage consumption basis

[2] A State-wide Milk Sanitation Program (Appendix A) By Leslie C Frank Pub Health Rep, vol 39, No 45 Nov 7 1924 (Reprint No 971)

The above figures show that there has been in these eight cities an average increase of well over 80 per cent in milk sanitation since the passage of the milk ordinance. It would be unwarranted, of course, to state that no other milk ordinance would have accomplished the same improvement in the same length of time, but it is believed conservative to state that the present ordinance does effect a significant increase in milk sanitation if properly enforced

In order to bring out the relative improvement in production and pasteurization ratings, Tables 2 and 3 are given below.

TABLE 2.—*United States Public Health Service milk sanitation ratings (production)*

City	Preenforcement		Postenforcement		Per cent increase
	Date	Rating	Date	Rating	
Montgomery	January, 1923	67 2	December, 1925	93 9	39 7
Florence	March, 1924	49.0	do	97 5	99 0
Selma	do	58 2	do	95 5	64.0
Tuscaloosa	do	53.3	do	94.0	76.4
Mobile	September, 1923	54 2	do	96 4	77.8
Huntsville	March, 1924	54.0	do	95 2	76.3
Gadsden	January, 1924	57 0	do	94 3	65 4
Albany-Decatur	March, 1925	16.2	do	80 8	398 5
Averages (weighted) [1]		56.8		94 8	66 9

[1] Weighted on gallonage consumption basis

Table 2 shows that the average production improvement in the eight cities has been 66.9 per cent, and that the individual production ratings for all except one of the eight cities are now well over 90 per cent, signifying that production sanitation has in these eight cities been brought to a high level within a comparatively short period of time.

TABLE 3.—*United States Public Health Service milk sanitation ratings (pasteurization)*

City	Preenforcement		Postenforcement		Per cent increase
	Date	Rating	Date	Rating	
Montgomery	January, 1923	4 0	December, 1925	24.4	510 0
Florence	March, 1924	0	do	0	0
Selma	do	.0	do	0	0
Tuscaloosa	do	6.2	do	31 3	405 0
Mobile	September, 1923	0	do	0	0
Huntsville	March, 1924	.0	do	38 9	
Gadsden	January, 1924	.0	do	.0	.0
Albany-Decatur	March, 1925	.0	do	65.8	
Averages (weighted) [1]		1 6		13 5	744.0

[1] Weighted on gallonage consumption basis

Table 3 shows that for the eight cities as a whole the pasteurization ratings were practically zero when the work began, that the percentage increase in the pasteurization ratings of four of the eight cities has

been large, but that the other four of the eight cities are still without pasteurization facilities.

The operation of a pasteurization plant in one of these cities, Florence, to pasteurize all of the city's milk supply, was begun on April 15, 1926. This city's pasteurization rating, therefore, advanced to nearly 100 per cent following the establishment of the plant.

In the other three cities sentiment is still strongly against pasteurization, but it is believed that opinion will lean more and more toward pasteurization as the educational work continues. In the meantime the consumers are being protected as much as possible by high production precautions.

(2) *The enforcement of the Public Health Service Standard Milk Ordinance has been followed by an increase in the volume of market milk sales*

Table 4 shows the increase in the volume and percentage of market milk sales in the eight Alabama cities previously considered.

TABLE 4 —*Increase in market milk consumption*

City	Preenforcement		Postenforcement		Per cent increase
	Date	Gallons per day	Date	Gallons per day	
Montgomery	January, 1923	1,588	December, 1925	2,713	70.9
Florence	March, 1924	277	March, 1925	345	24 5
Selma	do	605	do	669	10 6
Tuscaloosa	do	505	April, 1925	687	36 0
Mobile	September, 1923	[1] 2,000	December, 1925	3,351	67 6
Huntsville	March, 1924	365	March, 1925	417	15 3
Gadsden	January, 1924	362	December, 1925	370	2.2
Albany-Decatur	March, 1925	177	do	220	24 3
Totals and average		5,879		8,772	49 2

[1] Estimated

The average increase in market milk sales, following the application of the Standard Milk Ordinance, can not be interpreted to indicate the true increase in total milk consumption, as we are dealing with small cities in which the number of family cows is high and in which a fairly large percentage of the total milk consumed is from private cows. Again, it would not be scientifically sound to conclude that the increase in the consumption of milk has been caused by the application of the Standard Ordinance itself. However, the figures do indicate the actual increase in *market milk consumption*, and it is believed that while it is conceivable that some other cause could have been operative, this is not deemed likely.

Your committee wishes further to report that the Standard Milk Ordinance has, in general, elicited the support of the dairy industry. In a large number of the cities now operating under the Standard

Ordinance the passage of the ordinance was urged by the dairy industry itself

The support of the dairy industry is further illustrated by the indorsement given the Public Health Service program by the National Dairy Council, a national organization of the dairy interests.

Finally, the support of the dairy industry is evidenced by the fact that, so far as known, only two or three court cases have occurred in connection with milk control in all of the many cities now operating under the ordinance. None of these court cases has been decided against the city.

Your committee wishes further to report that the Public Health Service Standard Milk Ordinance has been enacted by practically all types of cities.

In the 10 States which have thus far adopted the Standard Milk Ordinance, the many cities which have enacted the ordinance into law include the largest cities in those States, cities with as small a population as 5,000, cities which had previously done no milk-control work whatever, cities which have spent many years in improving milk supplies, cities which are willing to require 100 per cent pasteurization, and cities which are largely opposed to pasteurization.

Your committee believes, therefore, that it may safely be stated that the ordinance is so framed as to be attractive to the majority of types of cities. However, it should be noted that none of the States in which the ordinance has become standard has cities of over 500,000 population, and it still remains for actual future experience to demonstrate whether the ordinance will be attractive or can be modified so as to become attractive to such large cities. On the other hand, your committee wishes to suggest in this connection that the principal problem with which we as State health officers have to deal is not that of our largest cities, as these in general have done far better milk sanitation work than the average in the State as a whole, but that our principal problem is rather that of our many smaller cities which are in general not yet advanced in milk-control methods.

PROPOSED MODIFICATIONS OF THE ORDINANCE

The Public Health Service has taken the position that its principal object is not to insist upon the exact wording of its present Standard Milk Ordinance, but rather to emphasize the vital need for the uniform adoption by the State health officers of the United States of the ordinance as it now stands or of any modification of the ordinance which is theoretically sound and practically effective.

Your committee has therefore been open to proposed modifications which might lead to general agreement and wide application.

The following modifications have thus far been suggested to your committee:

Proposed modification No. 1.—Section 1, definition: Add a definition for chocolate milk as follows. "Chocolate milk is defined as whole or adjusted or skim milk to which has been added in a sanitary manner a chocolate sirup composed of wholesome ingredients, and which is labeled with the grade of milk or milk products from which it is made. If chocolate milk contains less than 3¼ per cent milk fat the label shall indicate the percentage of milk fat to which the milk has been adjusted." It is recommended that this section be made optional with States.

Proposed modification No 2—Section 1, definition, adulterated milk and milk products· Change this definition to the following. "Any substance claimed to be any milk or milk product defined in this ordinance but not conforming with its definition as given in this ordinance shall be deemed adulterated and misbranded"

Proposed modification No. 3—Section 1, definition C. Change the minimum milk fat percentage for light creams from "18 per cent" to "18 per cent, preferably 20 per cent." Insert "containing not less than 30 per cent milk fat" after "whipping cream and manufacturing cream are creams"

Proposed modification No 3–a.—Delete definition E.

Proposed modification No 4—Section 1, definition O Insert "every particle of" after "shall be taken to refer to the process of heating" Change the pasteurization temperature from 142° to 145°

Proposed modification No 4–a—Definitions Q and S· Add the following sentence to each of these. "This section shall not be construed to include what is generally known as 'family cows.'"

Proposed modification No 5—Section 1, definition V Insert 'of the" after "to mean the average." Change "count" to "counts"

Proposed modification No 6—Section 4 Delete "(5) The percentage of milk fat if the package or other container encloses adjusted milk" and substitute therefor. "(5) Name of producer or distributor"

Add at the end of the first paragraph the following. "The label or mark shall be in letters of a size and kind approved by the health officer and shall contain no marks or words not approved by the health officer"

Insert "at all times" after "every grocery store, restaurant, * * * shall display."

Change the period at the end of section 4 to a comma, and add the following: "and including the following statement· 'The Safest Grade of Milk is Grade 'A' Pasteurized.'"

Proposed modification No. 6–a.—Section 5· Add at end of first paragraph: "Two violations of this ordinance within any one grading period shall call for immediate de-grading."

Proposed modification No. 6–b.—Section 6: Add "plate count method of" after "conformity with the" in third sentence of first paragraph.

Proposed modification No. 7.—Section 7. Delete "daily" in first sentence. Insert "and of the State Board of Health or City or County Health Officer" after "Medical Society of ——— County."

Proposed modification No. 8—Section 7, first paragraph· Delete "except that the permissible bacterial limits shall be multiplied fivefold in each case"

Proposed modification No 9—Grade "A" raw milk, cows, tuberculosis and other diseases. It is proposed that this item of sanitation be made identical with the new official wording approved by the Bureau of Animal Industry, provided that this wording shall be made to include isolation of infected animals and proper requirements concerning the addition of new cows to the dairy herd.

Proposed modification No 10.—Grade "A" raw milk, item 2: Change to "Such sections of all dairy barns where cows are kept or milked shall have at least three square feet of window space for each stanchion."

Proposed modification No 11—Grade "A" raw milk, item 3 Change to "Such sections of all dairy barns where cows are kept or milked shall have at least five hundred (500) cubic feet of air space per stanchion, and shall be well ventilated."

Proposed modification No 12—Grade "A" raw milk, item 4. Change the first part of the first sentence so as to read. "The floors and gutters of such parts of all dairy barns in which cows are kept or milked shall be constructed of concrete or other equally impervious * * *" Add at end of item "No horses, pigs, fowl, etc , shall be permitted in parts of the barn used for dairy purposes "

Proposed modification No 13—Grade "A" raw milk, item 5 Change the last sentence to read as follows "In case there is a second story above that part of the barn in which cows are kept or milked, the ceiling shall be tight "

Proposed modification No 14—Grade "A" raw milk, item 8 Change "cement" to "concrete" Add "and ventilated" after "the milk house shall be well lighted " Add "and the washing and sterilizing of milk apparatus and utensils" before the comma after the words "Storage of milk" in the first sentence

Proposed modification No. 15—Grade "A" raw milk, item 12 Insert "non-absorbent material and of" after "all containers or utensils used in the handling or storage of milk or milk products must be of "

Proposed modification No 16—Grade "A" raw milk, item 13 Change this item to read "All containers and other utensils used in the handling, storing, or transportation of milk and milk products must be thoroughly cleaned after each usage "

Proposed modification No 17.—Grade "A" raw milk, item 14. Change to read. "All containers and other utensils used in the handling, storage, or transportation of milk or milk products shall between each usage be sterilized with steam or chlorine or in a manner approved by the State health authority "

Proposed modification No. 18—Grade "A" raw milk, item 17: Change this item to read as follows: "The udders and teats of all milking cows shall be clean at the time of milking "

Proposed modification No 19—Grade "A" raw milk, item 19. Add at the end of this paragraph "Convenient facilities shall be provided for the washing of milkers' hands " Item 20· Add "and milk handlers" after "milkers " Item 22. Add "or straining room" at the end of the first sentence

Proposed modification No. 20—Grade "A" raw milk, item 24 Delete "preferbly" in first sentence. Change last sentence to read "Caps shall be purchased in sanitary tubes and kept therein in a clean place until used."

Proposed modification No 21—Grade "A" raw milk, item 25· Change this item to read as follows· "Every person connected with a dairy or milk plant whose work brings him in contact with the production, handling, storage, or transportation of milk or milk products shall have within twelve months passed a medical examination made by the health officer "

Proposed modification No 22.—Grade "A" raw milk, item 26: Change "within twenty-four hours" to "immediately "

Proposed modification No. 23—Grade "B" raw milk Add after "which at no time prior to delivery exceeds 200,000 per cubic centimeter" the following: "or which falls in class 1 as determined by the reductase test as described in the Standard Methods of Milk Analysis of the American Public Health Association." Delete the following· "Item (14) shall apply except that boiling water may be substituted for steam."

Proposed modification No 24.—Grade "C" raw milk: After "which at no time prior to delivery exceeds 1,000,000 per cubic centimeter," add the following: "or which falls in class 2 as determined by the reductase test as described in the Standard Methods of Milk Analysis of the American Public Health Association."

Proposed modification No. 25.—Grade "D" raw milk: After "does not exceed 5,000,000 per cubic centimeter" add the following: "or which falls in class 3 as determined by the reductase test as described in the Standard Methods of Milk Analysis of the American Public Health Association"

Proposed modification No 26—Grade "A" pasteurized milk, item 1. Insert "constructed of concrete or other equally impervious and easily cleaned material and shall be" after "floors of all rooms in which milk is handled shall be" Delete "impervious" from the original reading occurring after the word "smooth."

Proposed modification No 27.—Grade "A" pasteurized milk, item 5 Insert after first sentence the following "This requirement shall be interpreted to include separate rooms for (*a*) the pasteurizing, cooling, and bottling operations, (*b*) the container-washing and sterilizing operation. Cans of raw milk shall not be unloaded directly into the pasteurizing room"

Proposed modification No 28—Grade "A" pasteurized milk, item 6. Add at the end of second sentence "or stored"

Proposed modification No 29.—Grade "A" pasteurized milk, item 8: Change "wash room" to "washing facilities", change "equipped with" to "including"

Proposed modification No 30.—Grade "A" pasteurized milk, item 12. Change the wording of this item to the following "All milk containers and milk apparatus shall be thoroughly cleaned after each usage and sterilized in a manner approved by the health officer immediately before each usage"

Proposed modification No 31—Grade "A" pasteurized milk, item 13. Change "in an inverted position and in a clean place" to "in such manner as to be."

Proposed modification No. 32.—Grade "A" pasteurized milk, item 16. Add "dated and" after "the time and temperature record charts shall be."

Proposed modification No. 33—Grade "A" pasteurized milk, item 17: Change "upon receipt shall be" to "within two hours after it is received at the plant shall then be."

Proposed modification No 34—Grade "A" pasteurized milk, item 18: Add after "bottling shall be done" the following: "in automatic machinery approved by the health officer"

Proposed modification No 35.—Grade "A" pasteurized milk, item 22: Change the wording of this item to read as follows: "Every person connected with a dairy or milk plant whose work brings him or her in contact with the production, handling, storage, or transportation of milk or milk products shall have within twelve months passed a medical examination made by the health officer."

Proposed modification No 36.—Grade "A" pasteurized milk, item 23: Change "within twenty-four hours" to "immediately."

Proposed modification No. 37—Grade "C" pasteurized milk: Delete the last sentence beginning "Grade 'C' pasteurized milk shall be sold for cooking and manufacturing purposes only," etc

Proposed modification No. 38—Section 17, proscribed milk: It is suggested that this item be changed to read as follows: "Milk which does not conform with the following grades as described in this ordinance shall not be sold in the city of ——— —————————." (Any city which wishes to prohibit the sale of any of the grades of milk described in this ordinance may use this section for that purpose.)

Proposed modification No 39—Section 13, vehicles: Add "in such manner as to permit contamination."

Proposed modification No 40—Section 16: Add "which shall not be less than the Grade A requirements of this ordinance."

Your committee has made a careful study of each one of the above suggested modifications. It does not believe that any of them, with two or three exceptions, will either detrimentally affect the operation

of the Standard Ordinance or lead to disagreement. In fact, it believes that the proposed modifications will, if adopted, encourage a wider usage of the ordinance

The several proposed modifications which your committee feels may lead to disagreement are as follows

Proposed modification No 4, second part "Change the pasteurization temperature from 142° Fahrenheit to 145° Fahrenheit" Health officials seem to be about equally divided in their support of the two temperatures Your committee believes, however, that pending the outcome of future research work the temperature required by the ordinance should be 145° F, because this temperature gives the public the benefit of all doubt from a public health standpoint

Proposed modification No 17 This modification has been suggested by a State health department which believes that chlorine sterilization should be accepted as being as effective as steam sterilization It is believed that a number of health officers will disagree with this as not having been proved, particularly in view of the doubtful results which have been secured in the sterilization of milking machines by means of chlorine Your committee feels, however, that inasmuch as this is a debatable point, it will be wise to include the modification and invite such health officials as prefer to require steam expressly to do so.

Proposed modifications Nos 23, 24, and 25 These modifications propose the alternative acceptance of the reductase test in place of the bacterial count The proponents of the modification hold that the requirement of the bacterial count will be too costly for large cities with milk sheds of long radius, and that the accuracy of the bacterial count has been much overrated. The opponents to the modification hold that the reductase test is too crude.

Here, again, your committee feels that we are dealing with a debatable issue. Therefore it recommends that the proposed modification be included in the Standard Ordinance and that such States and cities as oppose it eliminate it as a local adaptation of the ordinance.

Your committee wishes to point out, in connection with the above recommended action, that any city which adopts the ordinance as above outlined will not have violated the spirit of the Standard Ordinance, which is that of "*minimum requirements*."

In conclusion, your committee has the honor to recommend that the Standard Milk Ordinance of the United States Public Health Service, modified as above suggested, be adopted by this conference as a uniform standard for the United States, with the understanding that small communities without laboratory facilities may pass the ordinance with the laboratory requirements deleted, and be recognized as having adopted the "Junior Standard Ordinance."

The members of the committee on uniform standard milk ordinance:

(Signed) S. W. WELCH,
Chairman.
A. J. CHESLEY,
C. A. HARPER,
E. L. BISHOP,
Members.

A NATIONAL PROGRAM FOR THE UNIFICATION OF MILK CONTROL[1]

By LESLIE C. FRANK, Sanitary Engineer, United States Public Health Service

During the past three years the United States Public Health Service has been encouraging the adoption of a uniform, effective milk sanitation program by the cities and States of the United States. On May 25, 1926, the Standard Milk Ordinance of the United States Public Health Service, slightly modified, was adopted as a standard for the United States by the Conference of State and Territorial Health Officers. The purpose of this paper is to discuss the conditions which make such a program advisable, to describe the program itself, and to discuss the progress made thus far.

A uniform effective milk control program is advisable because our present chaotic state of milk control in the Nation as a whole is permitting the occurrence of many milk-borne outbreaks of communicable disease

Trask[2] listed 500 outbreaks of milk-borne communicable disease as having been reported in the literature during the 27-year period, 1880 to 1907. The numbers of outbreaks reported for the various diseases are given in Table 1.

TABLE 1.—*Milk-borne disease outbreaks, 1880–1907 (Reported in United States and foreign countries)*

Disease.	Number of outbreaks
Typhoid fever	317
Scarlet fever	125
Diphtheria	51
Septic sore throat and pseudodiphtheria	7
Total number of outbreaks	500
Total number of outbreaks reported in the United States	168
Total number of outbreaks per year in the United States	6

In 1924 the Office of Milk Investigations of the United States Public Health Service made a questionnaire survey of milk-borne outbreaks occurring in the registration cities of the United States during the six-year period 1918 to 1923, inclusive. Table 2 gives the number of outbreaks reported.

TABLE 2.—*Milk-borne disease outbreaks in registration cities of the United States, 1918–1923, inclusive*

Disease:	Number of outbreaks
Typhoid fever	87
Scarlet fever	16
Diphtheria	4
Septic sore throat	4
Dysentery	1
Total number of outbreaks	112
Total number of outbreaks per year	18 7

[1] Expanded from a paper read at the American Health Congress, Atlantic City, N J, May 20, 1926

[2] United States Public Health Service Bulletin No 56

It will be noted that the rate of milk-borne outbreaks per year in the United States reported for the period 1918 to 1923 is 18.7, whereas the rate shown by the literature survey for 1880 to 1907 was 6. This does not necessarily mean that there has been an increase in the milk-borne outbreak rate, but rather that a questionnaire survey tends to give more complete returns than does a literature survey. Many epidemics not reported in the literature will be disclosed by a questionnaire.

In 1925 a questionnaire survey was made of milk-borne outbreaks occurring in 1924, with the following results:

TABLE 3.—*Milk-borne disease outbreaks reported in the United States during 1924*

Disease:	Number of outbreaks
Typhoid and paratyphoid fever	35
Scarlet fever	5
Diphtheria	1
Septic sore throat	1
Dysentery	2
Total number of outbreaks in 1924	44

A rate of 44 outbreaks per year for 1924, as shown in Table 3, is large compared with the rate of 18.7 outbreaks per year for the period 1918 to 1923. Here again, however, it is improbable that there was an actual increase in the milk-borne outbreak rate. It is more likely that the apparent increase indicates that the health office records of 1924 are more nearly complete than the records for the period 1918 to 1923, or that the health authorities are more active in identifying these outbreaks. City health officers come and go in many cities with distressing frequency, and records are often submerged in the transfer of the office.

However, the number of milk-borne outbreaks of disease is far greater than has hitherto been assumed; and it is evident that our past milk-control efforts, nationally considered, have not been adequate. There has been no effective leadership, no respected and uniform national program; hence health officers, bewildered by the array of milk ordinances from which to choose, have often chosen ineffective ones.

This constitutes the first reason why a uniform and effective milk-control program is advisable.

A uniform milk-control program is advisable because our present non-uniform methods have caused the dairy industry to discredit the health officer's knowledge of milk sanitation

There can be no doubt that there is at present in the United States little evidence of unity of thought among health officers in matters of milk control. Until very recently there have been almost as many different ordinances as there were health officers to write them.

We can, therefore, hardly criticize the dairy industry in general for doubting the soundness of the average health officer's knowledge of milk control. It can readily be understood that the dairyman has come to feel that "among so many different practices, some must be wrong. They can not all be sound." In fact, in many localities the dairyman has come to feel that the local milk ordinance is the personal invention of an individual untrained in the particular branch of public health involved, and is partly composed of requirements which have no real public health significance and which are unnecessary economic burdens upon the dairymen.

It is easy to understand, therefore, that many members of the dairy industry have developed a spirit of resistance to milk ordinances in general. A dairyman who doubts the health officer's knowledge of milk control will not carry out willingly an ordinance devised by that health officer This lack of respect for the health officer's knowledge by many persons in the dairy industry is believed to be partly responsible for the fact that the local milk ordinance is so unsatisfactorily complied with in so many communities

This is the second reason why it is advisable to establish a uniform and effective milk-control program in the United States We must earn the respect of the dairy industry before we can expect to achieve the optimum results in milk control.

A uniform and effective milk-control program is necessary because our present conflicting methods of milk control are partly responsible for a lower milk consumption than is desirable from a public health point of view

Many intelligent milk consumers seek advice of the pediatrician when they wish to secure a safe milk for infant feeding, and the pediatrician seldom gives *carte blanche* approval of the general market milk supply. He usually advises the purchase of "certified" milk, or the milk of some special dairyman This can only mean that the consumer and the pediatrician distrust the general milk supply. The very existence of medical milk commissions for the control of "certified" milk is, in effect, evidence that the consumer has found it advisable to set up a special unofficial health organization for the purpose of providing a safer milk supply than the health officer has provided.

It follows naturally as a result of this attitude on the part of the pediatrician that the consumer should begin to ask himself this question: If the general market milk supply is not safe enough for consumption by my baby, is it safe enough for consumption by the others of my family? And so we have a force working in the direction of low milk consumption, the opposite of which should be desired by every thoughtful health official. This general distrust of milk

quality on the part of the consumer is strengthened by the frequent exhibitions of resistance to the local milk ordinance displayed by the dairy industry, and is further strengthened by the frequent campaigns on the part of the local health officer for a new milk ordinance.

Under the present system of a confusion of local milk ordinances, many incoming health officers inaugurate campaigns for a new milk ordinance. The old milk ordinance, written by the previous health officer, is condemned and the milk-consuming public is advised that the dangers of the present milk supply are such as to make it necessary to pass an entirely new milk ordinance To the consumer this means a frequent confession on the part of the official health agency that the general city milk supply is not as safe as it might be Can we wonder, then, that the consumer drinks on the average about three quarters of a pint per day instead of the quart per day recommended by specialists?

It must be evident to the thoughtful person that a program of unification and stabilization of milk-control methods is necessary. It is difficult to conceive of a more unfortunate condition than the present one in which many producers of milk and many consumers of milk fail to have the proper confidence in the controlling official.

A uniform national milk control program is desirable because we are rapidly entering the era of interstate milk shipments, the successful control of which must inevitably be based upon uniform State standards if Federal control is to be avoided

During the early period of milk-control history, practically all communities received their milk supplies from immediately surrounding areas. This made a relatively short radius problem of milk control. As our solution of the fluid milk transportation problem has developed, however, it has become correspondingly easier for areas producing milk in large quantities to supply the demands of areas producing in small quantities, even where great distances intervene. For example, Florida is now receiving milk shipments from northern States. We are dealing here with an economic force which will unceasingly strive to establish a uniform milk-price level, and this can be done only by the removal of barriers to the free interstate shipment of milk. If, now, our control of these ever-increasing interstate milk shipments is to be logical and effective, it must be based eventually upon uniform interstate standards. To-day the State health officer of Florida is asking the State health officer of Alabama, "What is the quality of the milk which Alabama is shipping into Florida?" We need here a universal milk-control language. Compliance with Alabama standards may not satisfy Florida, and Alabama will not be willing to apply a different standard for every different State to which it may ship milk. This is, then, the fourth reason why a uniform national milk-control program is advisable.

Within recent years certain States have realized the need for a uniform milk-control program

During the past 10 years a few States have come to realize that State leadership is needed in order to achieve a unified milk-control program Thus, certain States have adopted various types of State milk ordinances, which they have then recommended for enactment by their various cities This has resulted in some good locally in improving milk supplies

It is even more necessary, however, to unify State standard ordinances than it is to unify the municipal milk ordinances within the State

It must be obvious that, unless the States now agree upon one uniform ordinance, we shall merely have advanced from a condition of intrastate to a condition of interstate confusion Now is a good time, when, for all practical purposes, the adoption of State standards is just beginning to advance from the idea of individual State ordinances to its logical and inevitable final conclusion, namely, a National standard

Ten States have within the past three years subscribed to the standard ordinance of the public health service

Although prior to 1923 no two States were operating under the same State milk ordinance, since 1923 ten States have, in rapid succession, adopted as standard an ordinance recommended by the United States Public Health Service. In these States nearly [illegible] communities have enacted the ordinance into law. The first State to adopt the Public Health Service program was Alabama, followed by North Carolina, Texas, Virginia, Tennessee, South Carolina, Missouri, Kentucky, Arkansas, and Louisiana, in the order named. There seems, therefore, to be some basis for the hope that within a reasonable period of time the majority of the States will be operating under one uniform milk-control program.

The Public Health Service Program for the unification of milk control involved four major items:

(1) The development of a practical standard milk ordinance.

(2) The encouragement of its adoption by States and its enactment by communities.

(3) The development of a policy of relationship between the cities, the States, and the Federal Government to promote effective enforcement of the ordinance.

(4) The development of a method of measuring the results of the enforcement of the ordinance.

The first part of the program was the development of a standard milk ordinance which would be generally applicable and generally effective in providing safe milk and stimulating its adequate consumption

In the endeavor to develop a standard ordinance it was decided first to set down the criteria to be used.

The following criteria were used in the development of the United States Public Health Service Standard Ordinance

(1) It must achieve the maximum practicable degree of milk safety

(2) It must encourage greater milk consumption

(3) It must elicit the cooperation of the dairy industry.

(4) It must be so framed as to be likely to be enacted by both small and large cities; cities with little or no previous milk control, and cities with long experience in milk control; cities with a majority sentiment in favor of pasteurization, and cities with a majority sentiment opposed to pasteurization.

Before applying the criteria in developing a standard ordinance it was necessary to know what was meant by safe milk

The easiest approach to the answer to the question, What is meant by safe milk? is believed to be through the answer to the question, Is the highest grade of raw milk which it is practicable to produce sufficiently safe? It would have simplified matters to have been able to answer this question affirmatively. There still remains considerable opposition to pasteurization, and most ordinances developed upon the principle that the highest grade raw milk is not sufficiently safe will meet with this opposition. After careful consideration a negative answer was found unavoidable. Experience in the operation of high-grade raw-milk dairies leads to the conviction that no precautions humanly possible are in practice sufficient to prevent at all times the transmission of disease organisms through raw milk.

Tuberculin testing is an important public-health measure. After years of consistent tuberculin testing, however, a small residual percentage of reactors will persist. Tuberculin testing should, therefore, be regarded by both the health officer and the industry as an important factor of safety from the public health point of view, and as an economic necessity for the dairy industry (it is simply bad business for the dairyman to permit tuberculosis to spread through his herd), *but not as a final and complete safeguard.*

Periodic search for typhoid carriers is an equally important public health measure. Health officers should not neglect to employ any practicable measure which will help to keep carriers of typhoid fever

from having to do with milk production or distribution. But even the recent advances in the laboratory technique for the recognition of typhoid carriers can not solve the problem of intermittency of discharge of the organisms by the carrier. A carrier may or may not be discharging the organisms of typhoid fever on the day on which the specimens of feces and urine are collected. If the result of the laboratory test is positive, the result is significant, but if the result is negative it means that the organism was not found in the specimen examined, not that the person examined is not a carrier. Hence, again, while the health officer must regard the search for typhoid carriers among milk handlers as one important factor of safety in milk control, he should not regard it as a final and complete safeguard against the spread of typhoid fever by carriers, it does not discover all carriers

Furthermore, what is to be done with the milker in the presymptom infective period, the period during which the infectiveness is often the greatest? There are no practicable precautions which can obviate this danger. In the case of certain infections spread through milk a milker can be in an infective condition for several hours or days before he has any symptoms whatever to warn him of his infection. Finally, even if there were no presymptom infective period we would still have to deal with the problem of the milk handler who persists in working for a time after the beginning of first symptoms and before a diagnosis has been made as to whether his condition is infective or not.

The above reasoning applies equally well to "certified" milk or to any other "highest grade" of raw milk. The fact that epidemics do not occur frequently among the users of certified milk is sometimes advanced as evidence that certified milk is sufficiently safe. Unhappily, this evidence is not convincing. The ratio of epidemics among users of certified supplies to epidemics among users of noncertified supplies reported to the United States Public Health Service in 1924 is 1:43, whereas the ratio of certified to noncertified dairies in the United States is considerably less than 1 43. Obviously the comparison of these ratios can not be taken to mean that certified milk is no safer than the general supply, but just as certainly it can not be taken to mean that certified milk is without danger.

The above is not intended as a criticism of the certified-milk movement which has provided an extremely valuable service during the past quarter century in emphasizing the need of better milk sanitation in general and higher quality production methods in particular; but this just appraisal of the certified-milk movement does not, unfortunately, invalidate the conclusion that any raw milk, however carefully safeguarded, is made still safer by the process of pasteurization.

Shall we abandon production precautions entirely, then, and rely solely upon pasteurization? This is what has been done in effect by

certain of our cities, particularly the larger cities. In many of these cities the control of production is little more than paper control; it is neither real nor effective Certainly, one inspection per year, or less, can not be accepted as control, and some of our cities inspect their sources of pasteurized milk even less often

It is believed that a policy which abandons production precautions and relies solely upon pasteurization is not sound. There can be no reasonable doubt that pasteurization, if properly applied, will prevent milk-borne infections. Pasteurization is in this respect certainly superior to raw milk precautions. But, on the other hand, the pasteurization process is not always properly applied It is designed and operated by human beings Many of the designs are not sound, occasional slips in operation are inevitable. Suppose we abandon production precautions entirely or largely, suppose many of the cows are not tuberculin tested and that a high percentage of tuberculosis exists in the herd (true for many of our large cities); suppose that we take no precautions against typhoid carries on the farm, etc.; if, then, a failure in the pasteurization process does occur, our last safeguard is down, and the consumer is left defenseless.

Furthermore, a very serious opposition to pasteurization comes from the feeling on the part of the consumer that pasteurization makes it possible for the dairy industry to deliver low-grade milk to the consumer with impunity. It is easy to understand why this should arouse the opposition of the consumer and discourage him in the consumption of milk He wishes not merely a safe product but also one which satisfies his desire for cleanliness and wholesomeness.

A policy, therefore, which ignores production precautions and relies solely upon pasteurization must be considered not only as unsound from the standpoint of safety but also as undesirable from the standpoint of adequate milk consumption. With due consideration of all factors involved, it is believed that "safe" milk should be defined as follows:

Safe milk is milk which has been both properly produced and properly Pasteurized.

Under such a definition "safe" milk has a factor of safety of 2--two barriers have been erected between the consumer and the various sources of infection: Production precautions constitute one factor of safety and pasteurization constitutes the other. Neither one is sufficient by itself. Both must go hand in hand. Under such a policy we are following what we have learned with respect to water supplies, namely, that the single factor of safety provided by a patrolled watershed or by filtration should be further reinforced by a second safeguard, namely, disinfection by chlorination or other means.

The most direct and obvious type of standard milk ordinance is a single grade ordinance which simply sets down the requirements for the ideal safe milk described above, and which bars all other milk from the market

The enforcement of such an ordinance in any city would mean that no milk could be sold except such as had satisfied every necessary production requirement and had been properly pasteurized. Such an ordinance would undoubtedly provide the maximum in safe milk and, by increasing the confidence of the consuming public in milk quality, would encourage greater milk consumption It would be the ideal standard ordinance if cities in general could be induced to pass it and to enforce it. It is practically certain, however, that very few cities are sufficiently advanced to enact such an ordinance or to enforce it properly Years of experience in the passage of milk ordinances bring the conviction that only the occasional city can be induced at the present time to pass an ordinance requiring universal pasteurization. In most cities the public is not sufficiently convinced as yet of the imperativeness of pasteurization to be willing to favor such an ordinance, and one mistake that we should by all means avoid is to proceed faster than public opinion will follow:

Furthermore, the practical objections to this type of ordinance as a universal standard do not confine themselves to the pasteurization phase. There are many cities which will not at the outset pass an ordinance which requires the utmost in production precautions for all milk. Here, again, we must be guided by actual experience and not be carried away with a theoretical ideal. Most cities still have to make their first earnest attack upon the milk-sanitation problem; it is yet new to them. If these cities are suddenly approached with a proposal to pass an ordinance requiring that all dairymen immediately satisfy high production requirements, many of them will refuse because of the opposition of the dairymen. The legislators will heed the plea of many of the dairymen that the ordinance will entail a prohibitive expense, force many of them out of business, disastrously reduce the available milk supply, and increase the price of milk to the consumer. This picture will be immediately familiar to anyone who has made it a business to encourage the passage of milk legislation.

There is no question that this ordinance would be the ideal type if it could be generally enacted and enforced; but if we were to permit our scientific convictions to overrule our practical judgment and attempt to promote a standard ordinance of this type we should simply be doing paper work. The result would not be the greatest good for the greatest number. Clearly this type of ordinance will not satisfy the criterion that the standard ordinance must be one which most cities can be induced to pass.

A second type of milk ordinance is one which still attempts to retain the single-grade feature but which attempts to overcome part of the practical difficulties previously described by reducing production requirements

By this second type of ordinance is meant the universal pasteurization ordinance which a very few of our cities have passed and which places little or no emphasis upon production requirements. This ordinance is unquestionably effective in reducing milk-borne outbreaks, but it is not suited for use as a general standard, for two reasons First, because it is a universal pasteurization ordinance, and, as previously indicated, few cities can be induced to pass such an ordinance, second, because of the previously discussed objections to any ordinance which ignores or minimizes production requirements.

A third general type of ordinance is one which frankly recognizes the practical objections to a single-grade ordinance and which divides market milk into classifications

Most of the cites of the United States operate under some variant of this general type of ordinance.

There are a number of different types of multiple classification ordinances. The first and most frequently used type is one which simply divides milk into two classifications, "raw" and "pasteurized," and describes the items of sanitation which must be satisfied by each of these two grades of milk.

This type of ordinance would possibly be satisfactory as a general standard if the requirements of the one pasteurized grade of milk could be made strict enough to satisfy the fundamental definition of "safe" milk, if the requirements of the one grade of raw milk included everything except pasteurization, and if the ordinance were then still lenient enough to insure passage by the majority of cities.

Unfortunately, it seems impossible to satisfy these opposing requirements in the same ordinance. In the attempt to use this type of ordinance the usual practice has been to state that milk which is produced from tuberculin-tested herds and which satisfies certain other production requirements may be sold raw and that all other milk must be pasteurized. This is unsatisfactory because of the lack of sufficient emphasis upon production requirements for the pasteurized milk. Furthermore, it leaves the consumer with the impression that the health officer is permitting high-grade milk to be sold raw, while all other milk, good and poor alike, may be dumped into the pasteurization apparatus and sold as the highest and only grade of pasteurized milk on the market. This leaves the consumer dissatisfied and leads, as previously described, to an incentive to a low milk consumption.

On the other hand, the very fact that lower grades of milk are permitted to be delivered to the pasteurization plants, while no distinction is drawn between the lower and the better grades, leads to a poor production incentive Even dairymen of high principles have little incentive to maintain their production precautions when they know that their milk is to be dumped into the same vat with that of their lax competitors, who nevertheless, often receive the same price This type of ordinance is one which has been adopted by some northern cities, the condition of the raw-milk supply of many of which is deplorable

If now we attempt to remedy these defects and step up the requirements of the one pasteurized grade to a degree which will satisfy the fundamental definition of safe milk and of the one raw grade to satisfy all except the pasteurization item, we will find ourselves confronted with the difficulty that most cities will hesitate and many of them refuse to enact it into law.

There would seem to be, then, only one other possible solution, namely, to construct an ordinance with a number of grades of both raw and pasteurized milk, with the upper grade in each class sufficiently high to satisfy the most exacting reasonable requirements and with the lowest grade in each class sufficiently relaxed to leave no excuse for the least-advanced city to refuse to pass it

At this point it may be helpful to revise somewhat the first criterion of the ideal standard ordinance, which was that the ordinance must be designed to achieve the maximum percentage of milk safety. Let us subdivide this criterion as follows:

(*a*) The ordinance must be designed so as to effect the maximum percentage of pasteurization which each city will support.

(*b*) The ordinance must improve as rapidly and as much as possible the quality of the milk before pasteurization.

(*c*) The ordinance must improve as rapidly and as much as possible the quality of any portion of the milk which remains unpasteurized.

Most health officers will undoubtedly agree that a standard ordinance which satisfies these three requirements will have exhausted the practical possibilities in encouraging safe milk.

Suppose, now, that we construct a standard ordinance which describes a number of grades of both raw and pasteurized milk, which, in part, bases the grading of pasteurized milk upon the excellence of the milk pasteurized, which allows the individual city to specify which grades of milk must be pasteurized and which grades shall be barred from the market, and which is prefaced by a foreword advising the city to require as nearly complete pasteurization as local opinion will support. Such an ordinance will have the following characteristics:

(1) It will achieve the maximum percentage of pasteurization which each city will support.

(2) It should improve the quality of the raw milk which is pasteurized as rapidly and as much as possible. (Since the grading of the pasteurized product is based partly upon the grade of the milk pasteurized, and the pressure of the buying public will be in the direction of the highest grade.)

(3) It should improve as rapidly and as much as possible the quality of any portion of the milk which remains unpasteurized. (If raw milk of more than one grade is permitted to be sold, the demand will be for the highest grade)

(4) It should encourage greater milk consumption, because even in cities where lower grades of milk are permitted to be sold the fact that the highest grade is available and recognizable should insure confidence in milk quality, which in turn should increase the demand.

(5) It should appeal to most cities, as it is sufficiently flexibly designed to fit itself to the varying intensities of opinion concerning pasteurization and to the varying states of advancement in milk control. The cities which have become sufficiently converted to pasteurization can require all grades to be pasteurized, and the cities which have reached the zenith of milk-control progress can bar all grades of milk from the market except grade "A" pasteurized. In this latter case the mere description of the lower grades can, with profit, be retained in the ordinance, as violations will probably arise from time to time of such minor nature as to make the health officer hesitate to bar the milk from the market immediately and altogether. In these cases he can resort to de-grading under the ordinance as a temporary punitive measure.

The ordinance adopted by the United States Public Health Service for use in its unification program is of the above grading-type. How many grades should be provided for in the standard ordinance, and what general requirements should be specified for each grade?

Careful consideration has led to the belief that it will be wise to provide for the following grades in the Standard Ordinance in order to meet all of the conditions which a standard ordinance is required to fulfill:

(a) *Grade "A" pasteurized milk* —This grade should be milk which has been produced in a cleanly manner and under all major safety precautions, and which has been properly pasteurized in a properly designed and operated plant. This grade of milk is therefore provided with a factor of safety of 2 It should be considered and recommended by the health officer as the safest grade of milk.

(b) *Grade "B" pasteurized milk* —This grade should be milk which has been produced in the absence of certain production precautions, such as tuberculin testing of cows or health examinations of employees, but in a cleanly manner,

and which has been properly pasteurized in a properly designed and operated plant. This grade of milk will therefore be provided with a factor of safety of 1.

It is necessary to provide for this grade because, as previously indicated, the majority of cities will not support an ordinance which limits the sale of milk to grade "A" pasteurized For example, many will not support compulsory tuberculin testing of all cows or compulsory medical examination of all farm employees, and yet those cities should be encouraged to pass a standard ordinance which will at least differentiate for the buying public the milk which does not comply with these items from that which does.

(*c*) *Grade "C" pasteurized milk*—This grade should comprise all pasteurized milk not complying fully with either "grade 'A' or grade 'B' pasteurized" requirements It is included in the Standard Ordinance because some cities and authorities feel that milk supplies can be brought to a high grade more adroitly and with less friction by a policy of de-grading than by a prohibition and court case policy Again, some cities and authorities feel that even after all of the milk supply of the city is of "grade 'A' or grade 'B' pasteurized" quality it is far easier and just as effective to punish occasional lapses by degrading than through the method of "closure" Furthermore, certain thoughtful State health officers feel that it will be wise to include this grade because many city health officers can be induced to punish by de-grading, whereas they will hesitate to go to the extreme of closing, and that where the only remedy is closure by forfeiture of permit many infractions will go unpunished.

It is believed to be certain that a pasteurization plant can not long endure the competitive pressure resulting from a "grade 'C'" label, and that for this reason no practical disadvantage will follow the inclusion of this grade in the Standard Ordinance As previously indicated, cities which do not wish to tolerate this grade, even for temporary punishment means, can bar it from sale altogether in the section of the ordinance designed for this purpose. The above reasoning holds also for grade "B" pasteurized milk with respect to the relative advantages of a closure policy as compared with a policy of de-grading

(*d*) *Grade "A" raw milk*—This grade of milk should be the highest grade of raw milk which it is practicable to produce It should meet certain production refinements, such as a very low bacterial count, a very low cooling temperature, and certain structural refinements which most authorities believe can not be practicably required in the production of grade "A" pasteurized milk.

This grade of milk is included in the Standard Ordinance because, as previously stated, most cities can not be induced to pass an ordinance requiring universal pasteurization

(*e*) Finally, the grades of raw milk acceptable for each of the three grades of pasteurized milk should be defined in the ordinance and can conveniently be termed "B," "C," and "D."

These grades will also be useful for smaller communities which have no pasteurization plants and which can not be induced to require all raw milk to be of grade "A" raw quality There are many such small communities, as experience in securing the passage of milk legislation has amply demonstrated. The fear need not be entertained that such cities will, as a result, tend to have much low-grade raw milk on the market Competition under the grading principle, if properly enforced, will usually result within a very short time in practically all of the milk reaching a "grade 'A' raw" level. On the other hand, stubborn insistence upon a policy or standard ordinance which would permit the sale of only "grade 'A' raw" milk in such hesitant cities would in many cases have led to failure to pass any ordinance, and hence failure to achieve the result above noted.

The second part of the Public Health Service unification program was to encourage the adoption of the Standard Ordinance by States and cities

This part of the program is now well under way. As previously indicated, 10 States have adopted the Public Health Service ordinance as standard and nearly 100 cities have enacted it into law.

Experience in securing the enactment of this ordinance has suggested a number of items of policy.

The first is that it is unwise to ignore the dairy industry in securing the passage of milk legislation. The legislation should not be approached with the implied attitude that most of the dairymen in the community are guilty of consciously foisting a dangerous product upon the consumers, and that what is needed is some drastic law to whip them into line. The legislation should not be held out as a device to force the dairymen to do what they would otherwise be unwilling to do, but rather as a device through which a dairyman can profit financially in direct ratio to the safety of his product.

The second item of policy is that the dairymen should not be told that the ordinance is being submitted for their vote of approval or disapproval, and that it will be introduced only if a majority vote of approval is secured. Such a policy would place the milk sanitation welfare of the consumers more completely in the control of the dairy industry than is warranted. After all, the consumers should have the power to choose the kind of milk they wish to buy, and the health officer is the direct representative of the consumers.

A good plan seems to be to advise the dairymen in meeting that the local health department has determined to ask the city to pass the United States Public Health Service Standard Milk Ordinance, but that as a courtesy to the dairymen it wishes to discuss the ordinance with them first, in order that its advantages to the industry may be clear and in order to give any individual dairyman ample opportunity to register a protest with the city authorities if he so desires. It may be emphasized that the principal reason for the conference between the health department and the dairy industry is to make clear to the latter the fact that the interests of the consumers and the interests of the dairy industry are really identical, in that both need insurance against milk-borne epidemics and in that both will profit by the consumption of more milk; further, that the standard ordinance is designed to accomplish both of these objects and that both the consuming public and the dairy industry should therefore be interested in promoting its passage.

The third item of policy is that the dairymen should be advised from the outset that whether or not the city adopts the Standard Milk Ordinance the health department must necessarily take the position that pasteurized milk is safer than raw milk. If this is not made clear to the dairymen at the outset they will have the feeling,

after the ordinance is in force and the health officer gives preference to pasteurized milk, that the health departmenth as misled them and this should by all means be avoided

The next item of policy is that the development of public opinion in favor of the milk ordinance should not be begun until after the ordinance has been informally discussed with the city authorities, otherwise the city authorities are likely to feel that the ordinance is being forced upon them.

A wise plan seems to be to discuss the ordinance with the city authorities at the outset and to make clear (1) that the health department recommends the passage of the Standard Milk Ordinance, (2) that it is desired to pass the ordinance without political embarrassment to the administration, and (3) that it is the plan of the health department, in case the administration fears political embarrassment, to develop favorable public sentiment and thus insure against political embarrassment.

The third part of the Public Health Service unification program was to develop a plan of relationship between cities, States, and the Public Health Service which would promote the uniform and effective enforcement of the standard ordinance

The mere enactment of a milk ordinance by a city does not guarantee enforcement. It is believed to be a conservative statement that at present the majority of cities do not effectively enforce their milk ordinances. There are four principal reasons for this: (1) Lack of adequate personnel and funds; (2) political interference; (3) lack of confidence on the part of the public in the soundness and tenability of the local ordinance, (4) lack of sustained interest on the part of the local health officer and the public

Lack of adequate personnel and funds is frequently a reflection of one or more of the other three factors If a community is not convinced as to the soundness of its milk regulations, if there is a political desire to hamper its enforcement, or if the local health officer is not interested in its enforcement, it will follow naturally that the necessary funds will not be applied to its enforcement. It is seldom actually true that a community can not actually afford adequate milk control. An average of 6 to 10 cents per capita per year is usually sufficient for enforcement, and it is probably safe to say that if a community is convinced of the desirability of milk control it will be willing to spend this amount upon it. Therefore the destruction of this barrier to enforcement would seem logically to lie in convincing the community of the necessity for proper milk control and of its practicability. It is believed that the community can be convinced if it is possible to lay before it a concrete measure of its inferior milk sanitation as compared with the excellence of milk sanitation in other

communities which appropriate adequate funds and use the proper methods

The second barrier—political interference—is frequently the result of opposition on the part of the dairy industry, operating through political powers which are probably more often than we suspect sincerely convinced that certain features of the local milk ordinance are not necessary or sound On the other hand, political barriers are sometimes purely political and not based upon lack of conviction.

Where the first condition exists the solution would seem to be to provide an ordinance in which the dairy industry will have confidence. It is believed that a standard ordinance of wide usage would be more likely to inspire such confidence than would a local ordinance.

In the few cases in which the second condition prevails, the most effective deterrent would be a periodic rating system which would automatically bring before the voting public the evil results of political interference with the operation of a good milk ordinance.

The third barrier to enforcement—lack of public confidence in the soundness and tenability of the local ordinance—will probably disappear in the city which adopts a standard ordinance operating successfully in a large number of other cities.

The fourth barrier—lack of sustained interest on the part of the local health officer and the public—exists more frequently than we suspect. Often this is due to the health officer's inability to convince himself that enforcement of his milk ordinance will lead to measurable results. He knows of no way to evaluate the results of his work and thus keep before his appropriating body an achievement which will inspire continued appropriations.

If there could be established a method by means of which the results of milk sanitation could be fairly and periodically measured, the interest of the local health officer could be awakened by the results in other cities and sustained by a periodic measurement of the improvement effected in his own city.

It is believed, therefore, that the most effective solvent of local enforcement barriers would be to set up a continuously operating plan under which the milk sanitation of cities was measured periodically. If we could establish a fair method of determining municipal milk sanitation ratings at periodic intervals, the following advantages would likely ensue:

(1) It would help the local health officer secure adequate funds and personnel in case a low rating of the city was the result of inadequate funds and personnel. In addition to emphasizing the disease hazards he could point to the poor advertising resulting from a low rating and the excellent advertising resulting from a high rating.

(2) It would tend to remove political interference where interference would be likely to lead to an official low rating evident to the voting public.

(3) It would maintain confidence on the part of the community in its milk ordinance and its health official if the milk ordinance were sound, properly enforced, and yielding a high rating.

(4) It would sustain interest in the proper enforcement of the ordinance on the part of the local health officer.

The Public Health Service unification program, therefore, includes the following two elements of relationship between the cities, the States, and the Public Health Service:

(1) The State is advised, upon adoption of the Public Health Service program, to have one of its milk-control officials visit each city in the State operating under the standard ordinance at least once during each grading period, and check the accuracy and uniformity of the inspection and the laboratory and grading methods, thus giving assurance to the city officials and to the dairy industry that uniform enforcement methods are being followed throughout the State. Among other advantages, the local health officer frequently finds this service of assistance in enabling him to resist pleas for special dispensation in grading He is able to take the position that he can not afford to make concessions, as his work will be checked by the State health department.

(2) A Public Health Service officer is detailed to each State operating under the program each year for a period long enough to coordinate the State's interpretation of the Standard Ordinance with that of the other States, and to determine jointly with the State the milk sanitation ratings of the various cities operating under the Standard Ordinance

We thus have a plan which gives the maximum assurance of continued uniform enforcement of the standard ordinance, and which gives a scientific measure once each year of the relative progress made by the various cities operating under the ordinance This leads us logically to the necessity of devising a means of measuring the result of municipal milk sanitation effort, and thus to the fourth part of the Service unification program.

The fourth part of the Public Health Service unification program was to determine a method of measuring the results of municipal milk sanitation effort

The plan devised by the Public Health Service is simple. Each item of sanitation, including both production and pasteurization items, is assigned a value which is intended to represent approximately its relative importance The credits for all items of sanitation total 1,000. In computing the milk sanitation rating for a community the credit value for each item of sanitation is multiplied by the percentage of the total milk supply of the community which complies with that item, the result being the "earned credit" for that item. The "earned credits" for all items are added and the sum is

divided by the sum of all possible credits (1,000). The result is the milk sanitation rating of the community. A 100 per cent rating means that all of the city's milk supply is both properly produced and properly pasteurized.

A subdivision of ratings has recently been inaugurated by subdividing the general rating into a production rating and a pasteurization rating, computed as follows. The total earned credits for production items are divided by the total possible credits for production items (500), and the total earned credits for pasteurization items are divided by the total possible credits for pasteurization items (500). These give, respectively, the production and pasteurization ratings.

A 100 per cent production rating means that all of the community's milk is properly produced. A 100 per cent pasteurization rating means that all of the community's milk is properly pasteurized. Thus, for a community in which pasteurization has not yet been inaugurated, the production rating might be 90 per cent, the pasteurization rating 0.0 per cent, and the combined rating 45 per cent.

Specimen milk sanitation ratings are presented in Appendix B. These are actual ratings and were determined in the routine survey work of the Public Health Service.

Preliminary observations following the application of the Public Health Service standard program

(1) The enforcement of the ordinance has been followed by an improvement in milk sanitation.

(2) The enforcement of the ordinance has been followed by an increase in the volume of market milk sales.

(3) The ordinance has elicited the support of the dairy industry.

(4) The ordinance has been enacted by many different types of cities.

The ordinance has been followed by an improvement in milk sanitation.—Table 4 shows the increase in the general milk sanitation ratings of eight Alabama cities which have now been operating under the Public Health Service ordinance long enough to make it worth while to measure results.

TABLE 4.—*United States Public Health Service milk sanitation ratings (general)*

City	Preenforcement		Postenforcement		Per cent increase
	Date	Rating	Date	Rating	
Montgomery	January, 1923	35.6	December, 1925	59.1	66.0
Florence	March, 1924	24.5	do	48.8	99.2
Selma	do	29.1	do	47.8	64.3
Tuscaloosa	do	29.7	do	62.7	111.1
Mobile	September, 1923	27.1	do	48.2	77.8
Huntsville	March, 1924	27.0	do	67.1	148.5
Gadsden	January, 1924	28.5	do	47.1	65.3
Albany-Decatur	March, 1925	8.1	do	73.3	805.0
Averages (weighted)[1]		29.2		54.2	85.6

[1] Weighted on gallonage consumption basis

The above figures show that there has been in these eight cities an average increase of well over 80 per cent in milk sanitation since the passage of the milk ordinance. It would be unwarranted, of course, to state that no other milk ordinance would have accomplished the same improvement in the same length of time, but it is felt that it is conservative to say that the ordinance does effect a significant increase in milk sanitation if properly enforced.

In order to illustrate the relative improvement in production and in pasteurization ratings, Tables 5 and 6 are given below.

TABLE 5.—*United States Public Health Service milk sanitation ratings (production)*

City	Preenforcement		Postenforcement		Per cent increase
	Date	Rating	Date	Rating	
Montgomery	January, 1923	67.2	December, 1925	93.9	39.7
Florence	March, 1924	49.0	do	97.5	99.0
Selma	do	58.2	do	95.5	64.0
Tuscaloosa	do	53.3	do	94.0	76.4
Mobile	September, 1923	54.2	do	96.4	77.8
Huntsville	March, 1924	54.0	do	95.2	76.3
Gadsden	January, 1924	57.0	do	94.3	65.4
Albany-Decatur	March, 1925	16.2	do	80.8	398.5
Averages (weighted)[1]		56.8		94.8	66.9

[1] Weighted on gallonage-consumption basis.

Table 5 shows that the average production improvement in the eight cities has been 66.9 per cent and that the individual production ratings for all except one of the eight cities are now well over 90 per cent, signifying that production sanitation has in these eight cities been brought to a high level within a comparatively short period of time.

TABLE 6.—*United States Public Health Service milk sanitation ratings (pasteurization)*

City	Preenforcement		Postenforcement		Per cent increase
	Date	Rating	Date	Rating	
Montgomery	January, 1923	4.0	December, 1925	21.4	510.0
Florence	March, 1924	0	do	0	0
Selma	do	0	do	0	0
Tuscaloosa	do	6.2	do	31.3	405.0
Mobile	September, 1923	0	do	0	0
Huntsville	March, 1924	0	do	38.9	
Gadsden	January, 1924	0	do	0	0
Albany-Decatur	March, 1925	0	do	65.8	
Averages (weighted)[1]		1.6		13.5	744.0

[1] Weighted on gallonage consumption basis.

Table 6 shows that for the eight cities as a whole the pasteurization ratings were practically zero when the work began, that the percentage increase in the pasteurization ratings of four of the eight cities

has been large, but that the other four of the eight cities were in December, 1925, still without pasteurization facilities In one of these four cities a pasteurization plant has now been placed in operation and is pasteurizing all the city's supply In the other three cities sentiment is still strongly against pasteurization, but it is believed that opinion will swing more and more toward pasteurization as the educational work proceeds In the meantime the consumers are being protected as much as possible by thorough production precautions.

In the five cities in which part of the milk is now pasteurized the increase in percentage of milk pasteurized has been as follows.

Montgomery, from 17 6 per cent to 26 7 per cent.
Tuscaloosa, from 19 8 per cent to 34 6 per cent.
Huntsville, from 19.2 per cent to 41 7 per cent.
Albany-Decatur, from 0 0 per cent to 68.2 per cent
Florence, from 0.0 per cent to 100 per cent.

The application of the Public Health Service Standard Milk Ordinance has been followed by an increase in the consumption of market milk

Table 7 shows the increase in the volume and percentage of market milk sales in the eight cities previously referred to.

TABLE 7 —*Increase in market milk consumption*

City	Preenforcement		Postenforcement		Per cent increase
	Date	Gallons per day	Date	Gallons per day	
Montgomery	January, 1923	1,588	December, 1925	2,713	70.9
Florence	March, 1924	277	March, 1925	345	24.5
Selma	do	605	do	669	10 6
Tuscaloosa	do	505	April, 1925	687	36 0
Mobile	September, 1923	[1] 2,000	December, 1925	3,351	67.6
Huntsville	March, 1924	365	March, 1925	417	15.3
Gadsden	January, 1924	362	December, 1925	370	2 2
Albany-Decatur	March, 1925	177	do	220	24.3
Totals and averages		5,879		8,772	49.2

[1] Estimated

It is evident from Table 7 that the milk consumers of the eight cities are drinking one and one-half times as much milk as they did before the application of the new program. This increase in market milk consumption can not, of course, be interpreted to indicate the true increase in total milk consumption, as we are dealing with small cities in which the number of family cows is high and in which a fairly large percentage of the total milk consumed is that from private cows. However, the figures do indicate a heavy increase in market milk consumption, and this should be very attractive to the dairy industry. Obviously it would not be scientifically sound to con-

clude that this increase in consumption of milk has been caused by the application of the standard program. It is conceivable that some other cause could have been operative, but this is deemed unlikely.

The Standard Ordinance has, in general, elicited the support of the dairy industry

In a large number of the cities now operating under the Standard Milk Ordinance the passage of the ordinance was urged by the dairy industry itself.

This has been one of the most gratifying features of the work. The history of milk legislation in the past has generally been that it has been enacted over the protest of the dairy industry. The support which has been accorded the present program by the dairy industry should be accepted as evidence that that industry is progressive and is mindful of its responsibility for the health of its patrons

The support of the dairy industry is further illustrated by the indorsement given the Public Health Service program by the National Dairy Council, a national organization of the dairy interests.

Finally, the support of the dairy industry is evidenced by the fact that, so far as known, only two or three court cases have occurred in connection with milk control in all of the many cities now operating under the ordinance. None of these court cases has been decided against the city.

The Standard Ordinance has been enacted by practically all types of cities

In the 10 States which have thus far adopted the Standard Milk Ordinance the many cities which have enacted the ordinance include some of the larger cities in those States; cities with a population as small as 5,000, cities which had previously done no milk-control work whatever, cities which have spent many years in improving milk supplies; cities which are converted to 100 per cent pasteurization; and cities which are largely opposed to pasteurization.

It is believed, therefore, that it may be fairly safely stated that the ordinance is so framed as to be attractive to the majority of types of cities. None of the States in which the ordinance has become standard has cities of over 500,000 population, and it still remains for actual future experience to demonstrate whether the ordinance will be attractive or can be modified so as to become attractive to such large cities.

CONCLUSION

In general, the preliminary results discussed above should be accepted as suggestive only, and not as conclusive. It is not believed that they cover either a sufficient number or range of cities nor a

sufficient period of time to be finally conclusive. It is believed, however, that they will be of value and interest to health officers and others impressed with the necessity for a solution of our national milk-control problem.

APPENDIX A

United States Public Health Service Standard Milk Ordinance

(Modified as adopted by the Conference of State and Territorial Health Officers at Washington, D. C. May, 1926)

AN ORDINANCE

Defining "Milk" and Certain "Milk Products," "Milk Producer," "Pasteurization," etc., Prohibiting the Sale of Adulterated and Misbranded Milk and Milk Products, Requiring Permits for the Sale of Milk and Milk Products, Regulating the Inspection of Dairy Farms and Milk Plants, the Testing, Grading Labeling, Placarding, Pasteurization, Regrading, Distribution, Sale, and Denaturing of Milk and Milk Products, Providing for the Publishing of Milk Grades, the Construction of Future Dairies and Milk Plants, the Enforcement of this Ordinance, and the Fixing of Penalties

Be it ordained by the ———— of the city of ———— as follows

SECTION 1. DEFINITIONS —The following definitions shall apply in the interpretation and the enforcement of this ordinance

Milk —(A) Milk is hereby defined to be the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and five days after calving, or such longer period as may be necessary to render the milk practically colostrum free; which contains not less than eight and one-half per cent (8½%) of solids not fat, and not less than three and one-fourth per cent (3¼%) of milk fat.

Milk fat or butter fat.—(B) Milk fat or butter fat is the fat of milk and has a Reichert-Meissel number of not less than twenty-four (24) and a specific gravity of not less than 0 905 (40° C /40° C).

Cream —(C) Cream, sweet cream, is that portion of milk, rich in milk fat, which rises to the surface of milk on standing or is separated from it by centrifugal force, is fresh and clean, and which contains not less than eighteen per cent (18%), preferably twenty per cent (20%) of milk fat; provided that cream having less than eighteen per cent milk fat shall be known as substandard cream.

Cream having less than thirty per cent (30%) milk fat shall be known as light cream.

Cream having thirty per cent (30%) or more and less than forty per cent (40%) milk fat shall be known as heavy cream, and cream having forty per cent (40%) or more milk fat shall be known as extra heavy cream.

Whipping cream and manufacturing cream are creams containing not less than 30% milk fat intended for whipping or manufacturing purposes, and the grades of same shall not be based on bacterial count.

Skimmed milk —(D) Skimmed milk is milk from which substantially all the milk fat has been removed.

Chocolate milk —(E) Chocolate milk is defined as whole or adjusted or skimmed milk to which has been added in a sanitary manner a chocolate syrup composed of wholesome ingredients, and which is labeled with the grade of milk or milk products from which it is made. If chocolate milk contains less than three and one-quarter per cent (3¼%) milk fat, the label shall indicate the percentage of milk fat to which the milk has been adjusted. (This section is optional with States.)

Buttermilk.—(F) Buttermilk is the product which remains when milk fat is removed from milk or cream, sweet or sour, in the process of churning It contains not less than eight and five-tenths per cent (8 5%) of milk solids not fat.

Cultured buttermilk—(G) Cultured buttermilk is the product resulting from the souring or treatment by a lactic acid culture of milk or milk products.

Evaporated milk (unsweetened)—(H) Evaporated milk (unsweetened) is milk from which a considerable portion of water has been evaporated and which contains not less than twenty-five and five-tenths per cent (25 5%) of milk solids and not less than seven and eight-tenths per cent (7 8%) milk fat

Condensed milk (sweetened)—(I) Condensed milk (sweetened) is milk from which a considerable portion of water has been evaporated, to which sugar has been added, and which contains not less than twenty-eight per cent (28%) of milk solids and not less than eight per cent (8%) milk fat

Condensed skimmed milk—(J) Condensed skimmed milk is skimmed milk from which a considerable portion of water has been evaporated, and which contains not less than twenty per cent (20%) of milk solids

Powdered (dried) whole milk—(K) Powdered whole milk is milk from which substantially all the water has been removed, and which contains not less than twenty-six per cent (26%) of milk fat and not more than five per cent (5%) of moisture

Powdered (dried) skimmed milk—(L) Powdered skimmed milk is skimmed milk from which substantially all the water has been removed, and which contains not more than five per cent (5%) of moisture

Recombined milk.—(M) Recombined milk is a substance produced by recombining powdered whole milk, powdered skimmed milk, condensed or evaporated whole milk, or skimmed milk, and milk fat, with water, and shall conform in milk-fat percentage and bacterial counts to the provisions of this ordinance relating to milk

Milk products—(N) Milk products shall be taken to mean and include cream, skimmed milk, adjusted milk, buttermilk, cultured buttermilk, evaporated milk (unsweetened), condensed milk (sweetened), condensed skimmed milk, powdered whole milk, powdered skimmed milk, and recombined milk.

Pasteurization—(O) The terms "Pasteurization," "Pasteurized," "Pasteurize," and similar terms shall be taken to refer to the process of heating every particle of milk or milk products to a temperature of not less than one hundred and forty-five degrees (145°) Fahrenheit, and holding at such temperature for not less than thirty (30) minutes in pasteurization apparatus approved by the health officer, the temperature and time being automatically recorded by a temperature and time recording device approved by the health officer.

Adulterated milk and milk products—(P) Any substance claimed to be any milk or milk product defined in this ordinance but not conforming with its definition as given in this ordinance shall be deemed adulterated and misbranded.

Milk producer—(Q) A milk producer is any person, firm, or corporation which owns or controls one or more cows, a part or all of the milk from which is for sale, or sold or delivered to another person, firm, or corporation. This section shall not be construed to include what is generally known as "family cows"

Milk distributor—(R) A milk distributor is any person, firm, or corporation which has in possession, offers for sale, sells, or delivers to another any milk or milk products for consumption or manufacturing purposes.

Dairy or dairy farm—(S) A dairy or dairy farm is any place or premises where one or more cows are kept, a part or all of the milk or milk products from which is sold or delivered to any person, firm, or corporation This section shall not be construed to include what is generally known as "family cows."

Milk plant.—(T) A milk plant is any place, or premises, or establishment where milk or milk products are collected, handled, processed, stored, bottled, pasteurized, or prepared for distribution.

Health officer.—(U) The health officer shall be taken to mean the health officer of the city of ———— in person, or his authorized representative.

Average bacterial count.—(V) Average bacterial count shall be taken to mean the average of the bacterial counts of all samples taken during the grading period, including at least four samples taken upon separate days.

Grading period.—(W) The grading period shall be such period of time as the health officer may designate, within which grades shall be determined for all milk and cream supplies, provided that the grading period shall in no case exceed six (6) months.

Disinfectant.—(X) A disinfectant is any germicidal substance approved by the health officer.

SEC. 2. THE SALE OF ADULTERATED OR MISBRANDED MILK OR MILK PRODUCTS PROHIBITED.—No person, firm, association, or corporation shall within the city of ———— produce, sell, offer or expose for sale, or have in possession with intent to sell any milk or milk product which is adulterated or misbranded.

SEC. 3. PERMITS.—It shall be unlawful for any person, firm, association, or corporation to bring into or receive into the city of ————, for sale, or to sell, or offer for sale therein, or to have on hand any milk or milk product, excepting evaporated milk, condensed milk, condensed skimmed milk, powdered whole milk, and powdered skimmed milk, who does not possess an unrevoked permit from the health officer of the city of ————, and on whose vehicles or in whose place of business there does not appear in a conspicuous place a placard showing the permit number in figures at least three inches high and one and one-half inches wide.

Such a permit may be revoked by the health officer upon the violation by the holder of any of the terms of this or any other health ordinance of the city of ————, provided that the holder of said permit shall, after complying with such revocation, have the right of appeal to the board of health.

SEC. 4. LABELING AND PLACARDING.—All bottles, cans, packages, and other containers enclosing milk or any milk product defined in this ordinance shall be plainly labeled or marked with (1) the name of the contents as given in the definitions in this ordinance; (2) the grade of the contents if said contents are graded under the provisions of this ordinance, (3) the word "pasteurized" if the contents have been pasteurized; (4) the word "raw" if the contents are raw; (5) name of producer or distributor. The label or mark shall be in letters of a size and kind approved by the health officer and shall contain no marks or words not approved by the health officer.

Every grocery store, restaurant, café, soda fountain, or similar establishment selling or serving milk shall display at all times, in a place designated by the health officer, a card furnished by the health officer, stating the grade of the milk at the time when delivered and whether same is raw or pasteurized, and including the following statement: *The Safest Grade of Milk is Grade "A" Pasteurized*.

SEC. 5. INSPECTION OF DAIRY FARMS AND MILK PLANTS FOR THE PURPOSE OF GRADING OR REGRADING.—At least once during each grading period the health officer shall inspect every dairy farm producing milk or cream for consumption within the city of ————, and all milk plants whose milk or cream is intended for consumption within the city of ————. In case the health officer discovers the violation of any item of sanitation, he shall make a second inspection after a lapse of such time as he deems necessary for the defect to be remedied but not before the lapse of three days, and the second inspection shall be used in

determining the grade of milk or cream. Two violations of this ordinance within any one grading period shall call for immediate de-grading

One copy of the inspection report shall be posted by the health officer in a conspicuous place upon an inside wall of one of the dairy farm or milk plant buildings, and said inspection report shall not be removed by any person except the health officer Another copy of the inspection report shall be filed with the records of the health department

SEC 6 THE TESTING OF MILK AND MILK PRODUCTS—During each grading period at least four samples of milk or cream from each dairy farm and each milk plant shall be tested by the health officer. Samples of milk and cream from stores, cafés, soda fountains, restaurants, and other places where milk products are sold shall be tested as often as the health officer may require Bacterial counts shall be made in conformity with the plate-count method of the standard methods recommended by the American Public Health Association. Tests may include such other chemical and physical determinations as the health officer may deem necessary for the detection of adulteration Notices of bacterial counts shall be given to the producer or distributor concerned as soon as made, or to any interested person on request Samples may be taken by the health officer at any time prior to the final delivery of the milk or milk products All stores, cafés, restaurants, soda fountains, and other similar places shall furnish the health officer, upon his request, with the name of the milk distributor from whom their milk is obtained

Should the market value of any single sample exceed twenty-five cents the city of ———— shall pay the distributor therefor

SEC. 7 THE GRADING OF MILK AND CREAM—At least once every six (6) months the health officer shall announce through the press the grades of all milk and cream supplies delivered by all producers or distributors and ultimately consumed within the city of ————. Said grades shall be based upon the following standards, the grading of cream being identical with the grading of milk.

Certified Milk

Certified milk is milk which conforms with the requirements of the American Association of Medical Commissions, and is produced under the supervision of the Medical Milk Commission of the Medical Society of ———— County, and of the State Board of Health or City or County Health Officer.

Grade "A" Raw Milk

Grade "A" raw milk is milk the average bacterial count of which as determined under section 6 of this ordinance does not exceed 50,000 per cubic centimeter, and which is produced upon dairy farms conforming with all of the following items of sanitation.

Cows Tuberculosis and other diseases—(1) A physical examination and tuberculin test of all cows shall be made before any milk therefrom is sold, and at least once every twelve months thereafter by a veterinarian approved by the health officer or by the State livestock sanitary authority, and said tests shall be made, and any reactors disposed of, in accordance with the current requirements approved by the United States Bureau of Animal Industry for accredited herds

A certificate signed by the veterinarian and filed with the health officer shall be the only valid evidence of the above test. Every diseased animal shall be removed from the herd at once and no milk from diseased cows shall be offered for sale All reacting animals shall be isolated at once and immediately excluded from the premises All animals failing to pass the T B test shall be branded with the letters "T" or "TB" on the shoulder, hip, or jaw, and removed at once and slaughtered under the direction of the health officer Each letter in the brand shall be not less than two inches high and one and one-half inches wide.

Dairy barns.—(2) Lighting. Such sections of all dairy barns where cows are kept or milked shall have at least three square feet of window space for each stanchion.

(3) Air space. Such sections of all dairy barns where cows are kept or milked shall have at least five hundred (500) cubic feet of air space per stanchion, and shall be well ventilated.

(4) Floors. The floors and gutters of such parts of all dairy barns in which cows are kept or milked shall be constructed of concrete or other equally impervious and easily cleaned material approved by the health officer and shall be graded to drain properly, and shall be kept clean and in good repair. No horses, pigs, fowl, etc., shall be permitted in parts of the barn used for dairy purposes.

(5) Walls and ceilings. The walls and ceilings of all dairy barns shall be whitewashed once each year or painted once every two years, or finished in a manner approved by the health officer, and shall be kept clean and in good repair. In case there is a second story above that part of the barn in which cows are kept or milked, the ceiling shall be tight.

(6) Cow yard. All cow yards shall be graded and drained as well as practicable and kept clean.

(7) Manure disposal. All manure shall be removed and stored or disposed of in such manner as best to prevent the breeding of flies therein.

Milk house or room.—(8) Construction. There shall be provided a separate milk house or milk room for the handling and storage of milk and the washing and sterilizing of milk apparatus and utensils, provided with a tight floor constructed of concrete or other impervious material and graded to provide proper drainage. The walls and ceilings of the milk house or room shall be of such construction as to permit easy cleaning, and shall be painted at least once each year or finished in a manner approved by the health officer. The milk house or room shall be well lighted and ventilated and all openings effectively screened to prevent the entrance of flies, and shall be used for no other purpose than the handling and storage of milk or milk products and other operations incident thereto. The cleaning and other operations shall be so located and conducted as to prevent any contamination one to the other. The milk room shall not open directly into the barn or into any room used for sleeping or domestic purposes.

(9) Cleanliness and flies. The floors, walls, ceilings, and equipment of the milk house or room shall be kept clean at all times. All means necessary for the elimination of flies shall be used.

(10) Toilet. Every dairy farm shall be provided with a sanitary toilet constructed and operated in accordance with the ordinances of the city of ——————.

(11) Water supply. The water supply shall be easily accessible, adequate, and of a safe sanitary quality.

Utensils.—(12) Construction. All containers or utensils used in the handling or storage of milk or milk products must be made of non-absorbent material and of such construction as to be easily cleaned, and must be in good repair. Joints and seams shall be soldered flush. All milk pails shall be of a narrow-mouth design approved by the health officer.

(13) Cleaning. All containers and other utensils used in the handling, storage, or transportation of milk and milk products must be thoroughly cleaned after each usage.

(14) Sterilization. All containers and other utensils used in the handling, storage, or transportation of milk or milk products shall between each usage be sterilized with steam or chlorine or in a manner approved by the State health authority.

(15) Storage: All containers and other utensils used in the handling, storage or transportation of milk or milk products shall be stored so as not to become contaminated before again being used.

(16) Handling After sterilization no container or other milk or milk product utensil shall be handled in such manner as to permit any part of the person or clothing to come in contact with any surface with which milk or milk products come in contact.

Milking.—(17) Udders and teats The udders and teats of all milking cows shall be clean at the time of milking

(18) Flanks· The flanks of all milking cows shall be kept free from visible dirt at the time of milking

(19) Milkers' hands· Milkers' hands shall be clean, rinsed with a disinfectant, and dried with a clean towel immediately before milking Should the milking operation be interrupted, the milkers' hands must be redisinfected Wet hand milking is prohibited Convenient facilities shall be provided for the washing of milkers' hands

(20) Clean clothing· Milkers and milk handlers shall wear clean outer garments while working

(21) Milk stools Milk stools shall be kept clean

(22) Removal of milk Each pail of milk shall be removed immediately to the milk house or straining room No milk shall be strained in the dairy barn.

(23) Cooling Milk must be cooled within one hour after milking to 50 degrees Fahrenheit or less and maintained at or below that temperature until delivery, unless it is delivered to a milk plant for pasteurization or separation, in which case it must be cooled or pasteurized within two hours of the time of production

(24) Bottling and capping Capping shall be done by machine Caps shall be purchased in sanitary tubes and kept therein in a clean place until used

Personnel.—(25) Health certificates Every person connected with a dairy or milk plant whose work brings him in contact with the production, handling, storage, or transportation of milk or milk products shall have within twelve months passed a medical examination made by the health officer.

(26) Notification of disease Notice shall be sent to the health officer immediately by any milk producer or distributor upon whose dairy farm any case of sickness or any infectious, contagious, or communicable disease occurs

Grade "B" Raw Milk

Grade "B" raw milk is milk the average bacterial count of which at no time prior to delivery exceeds 200,000 per cubic centimeter, or which falls in class 1 as determined by the reductase test as described in the Standard Methods of Milk Analysis of the American Public Health Association, and which is produced upon dairy farms conforming with all the items of sanitation required for grade "A" raw milk except (2), (3), (4), (5), or (6), provided that cleanliness of the barn and cow yard shall in no case be omitted Item (23) shall apply except that the cooling temperature shall be changed to sixty (60) degrees Fahrenheit.

Grade "C" Raw Milk.

Grade "C" raw milk is milk the average bacterial count of which at no time prior to delivery exceeds 1,000,000 per cubic centimeter, or which falls in class 2 as determined by the reductase test as described in the Standard Methods of Milk Analysis of the American Public Health Association, and which is produced on dairy farms conforming with all the items of sanitation required for Grade "B" raw milk, except (1), (7), (12), (14), (23), (24), or (25), provided that cleanliness shall in no case be omitted.

Grade "D" Raw Milk.

Grade "D" raw milk is milk which does not meet the requirements of grade "C" raw milk, and the average bacterial count of which does not exceed 5,000,000 per cubic centimeter, or which falls in class 3 as determined by the reductase test as described in the Standard Methods of Milk Analysis of the American Public Health Association.

Grade "A" Pasteurized Milk

Grade "A" pasteurized milk is grade "A" or grade "B" raw milk which has been pasteurized, cooled, and bottled in a milk plant conforming with all of the following items of sanitation and the average bacterial count of which at no time after pasteurization and until delivery exceeds 50,000 per cubic centimeter.

Buildings and equipment.—(1) Floors The floors of all rooms in which milk is handled shall be constructed of concrete or other equally impervious and easily cleaned material and shall be smooth, properly drained and provided with trapped drains, and kept clean.

(2) Walls and ceilings Walls and ceilings of rooms in which milk is handled or stored shall be frequently painted with a light-colored paint or finished in a manner approved by the health officer and kept clean

(3) Doors and windows All openings into the outer air shall be effectively screened to prevent the access of flies Doors shall be self-closing

(4) Lighting and ventilation: All rooms shall be well lighted and ventilated

(5) Protection from contamination and flies. The various milk-plant operations shall be so located and conducted as to prevent any contamination one to the other All means necessary for the elimination of flies shall be used This requirement shall be interpreted to include separate rooms for (*a*) the pasteurizing, cooling, and bottling operations, (*b*) the container-washing and sterilizing operation Cans of raw milk shall not be unloaded directly into the pasteurizing room.

(6) Toilet facilities: Every milk plant shall be provided with toilet facilities conforming with the ordinances of the city of ————. There shall be at least one room or vestibule not used for milk purposes between the toilet room and any room in which milk or milk products are handled or stored. The doors of all toilet rooms shall be self-closing. Toilet rooms shall be kept in a clean condition, in good repair, and well ventilated. In case privies or earth closets are permitted and used, they shall be located at least 100 feet from the building, and shall be of a sanitary type constructed and operated in conformity with the ordinances of the city of ————.

(7) Water supply. The water supply shall be easily accessible, adequate, and of a safe, sanitary quality.

(8) Washing facilities Washing facilities shall be provided, including hot running water, soap, and sanitary towels of a type approved by the health officer. The use of a common towel is prohibited.

(9) Milk piping. Only "sanitary milk piping" of a type which can be easily cleaned with a brush shall be used.

(10) Construction of equipment All equipment with which milk comes in contact shall be constructed in such manner as to be easily cleaned.

(11) Disposal of wastes: All wastes shall be disposed of in conformity with the requirements of the health officer.

Methods. (12) All milk containers and milk apparatus shall be thoroughly cleaned after each usage and sterilized in a manner approved by the health officer immediately before each usage.

(13) Storage of containers: After sterilization all bottles, cans, and other containers shall be stored in such manner as to be protected from contamination.

(14) Handling of containers and apparatus: Between sterilization and usage all containers and apparatus shall be handled in such manner as to prevent any part of the person or clothing from coming in contact with any surface with which milk or milk products come in contact.

(15) Storage of caps: Milk-bottle caps shall be purchased and stored only in sanitary tubes and shall be kept therein until used.

(16) Pasteurization Pasteurization shall be performed as described in the definition section of this ordinance. The time and temperature records charts

shall be dated and preserved for a period of three months for the information of the health officer.

(17) Cooling All milk not pasteurized within two hours after it is received at the plant shall then be immediately cooled to a temperature of 50 degrees Fahrenheit or less and maintained thereat until pasteurized, and all pasteurized milk shall be immediately cooled to a temperature of 50 degrees Fahrenheit or less and maintained thereat until delivery.

(18) Bottling Bottling shall be done in automatic machinery approved by the health officer in such manner as to prevent any part of the person or clothing from coming in contact with any surface with which milk or milk products come in contact

(19) Overflow milk· Overflow milk which has become machine contaminated shall not be sold for human consumption

(20) Capping: Capping shall be done by machinery approved by the health officer Hand capping is prohibited

(21) Time of delivery Milk to be consumed in the form of whole milk shall be delivered to the final consumer within 36 hours of the time of pasteurization

Personnel—(22) Health certificates· Every person connected with a dairy or milk plant whose work brings him or her in contact with the production, handling, storage, or transportation of milk or milk products shall have within twelve months passed a medical examination made by the health officer

(23) Notification of disease: Notice shall be sent to the health officer immediately by any milk producer or distributor upon whose dairy farms or in whose milk plant any case of sickness or any infectious, contagious, or communicable disease occurs

(24) Cleanliness All persons coming in contact with milk or milk-products containers or equipment shall wear clean outer garments and shall keep their hands clean at all times while thus engaged

Grade "B" Pasteurized Milk:

Grade "B" pasteurized milk is grade "A," "B," or "C," raw milk which has been pasteurized, cooled, and bottled in a milk plant conforming with all of the items of sanitation required for grade "A" pasteurized milk excepting (2), (4), or (24), and the average bacterial count of which at no time after pasteurization and prior to delivery exceeds 100,000.

Grade "C" Pasteurized Milk·

Grade "C" pasteurized milk is pasteurized milk which does not meet the requirements of grade "B" pasteurized milk, and the average bacterial count of which at no time prior to delivery exceeds 500,000 per cubic centimeter.

SEC 8. GRADES OF RAW MILK WHICH MUST BE PASTEURIZED—The wording of this section should be adjusted to the degree of support which the community will accord pasteurization. If a pasteurization plant is already in existence, or can be established, and the majority of the voting public can be educated to support complete pasteurization, this section should read as follows:

"At the expiration of twelve months from the date on which this ordinance takes effect, and thereafter, all grades of milk sold in the city of ———— shall be pasteurized before delivery to the consumer."

Other communities in which a pasteurization plant exists or can be established, but in which the prevailing sentiment can not easily be converted to complete pasteurization, should be urged to limit the sale of raw milk to grade "A" raw milk after the lapse of one year.

Communities which can not be induced to adopt even this second alternative may permit lower grades to be sold raw, but should keep constantly in mind, as they make progress under this ordinance, the desirability of achieving complete pasteurization as soon as possible.

SEC. 9.—SUPPLEMENTARY REGRADING.—At any time between regular announcements of milk grades any producer or distributor may make application for regrading his product.

In case the applicant's existing low grade is due to excessive bacterial count, said application must be supported by at least two bacteriological examinations made subsequent to the end of the previous grading period and indicating that the quality of the applicant's output has improved since the last grading announcement and conforms with the requirements of a higher grade. The samples upon which the said two analyses are made may be brought to the health department laboratory by the applicant.

Upon the receipt of a satisfactory application, the health officer shall make at least four bacteriological analyses upon samples collected by the health officer of the applicant's output within a period of not less than two weeks and not more than three weeks of the date of the application. The health officer shall award a higher grade immediately in case the said four analyses indicate the necessary quality.

In case the applicant's existing low grade is due to a violation of an item of sanitation other than bacterial count, said application must be accompanied by a statement signed by the applicant to the effect that the violated item of sanitation has been conformed with. Within one week of the receipt of such an application the health officer shall make a reinspection of the applicant's establishment and, in case the findings justify, shall award a regrade.

At any time between regular announcements of milk grades the health officer may lower the grade of any milk producer or distributor if, as a result of inspection or milk analyses, a lower grade shall be justified in accordance with the terms of this ordinance.

SEC. 10. TRANSFERRING OR DIPPING MILK.—No milk producer or distributor shall transfer milk or milk products from one container to another upon the street or in any vehicle or store, or in any place except a bottling or milk room especially used for that purpose, except as may be specially permitted by the health officer in the case of milk being delivered in bulk. The sale of dip milk is hereby expressly prohibited.

It shall be unlawful for hotels, soda fountains, restaurants, and similar establishments to sell or serve any whole milk or adjusted milk except in the original container in which it was received from the producer or distributor.

SEC. 11. MILK NOT TO BE PASTEURIZED OUTSIDE OF ———— COUNTY.—No milk or cream shall be sold in the city of ———— that has been pasteurized outside the county of ————, except as may be authorized by the health officer.

SEC. 12. SPITTING.—No person shall spit, except into a receptacle provided for the purpose, in any part of any room, vehicle, or other place used for the sale, storage, handling, or transportation of milk.

SEC. 13. VEHICLES.—All vehicles used for delivery of milk in the city of ———— shall be so constructed as to protect the milk from the sun and from contamination. Such vehicles shall be kept clean while used in transporting milk or milk products. No substance capable of contaminating milk or milk products shall be transported with milk or milk products in such manner as to permit contamination.

SEC. 14. DENATURING MISBRANDED PRODUCTS.—The health officer shall immediately denature with rennet or some harmless coloring matter any milk or milk product found misbranded with respect to grading or sold without a permit.

SEC. 15. REPASTEURIZATION PROHIBITED.—No milk or milk products shall be pasteurized more than once.

SEC. 16. FUTURE DAIRIES AND MILK PLANTS.—All dairies and milk plants from which milk is supplied to the city of ————, which are hereafter constructed,

shall conform in their construction to the requirements of the health officer, which shall not be less than the grade "A" requirements of this ordinance

SEC 17 PROSCRIBED MILK —Milk which does not conform with the following grades as described in this ordinance shall not be sold in the city of ———— ———— (Any city which wishes to prohibit the sale of any of the grades of milk described in this ordinance may use this section for that purpose)

SEC 18. PENALTY.—Any person, firm, association, or corporation who shall violate any provision of this ordinance shall be fined not more than one hundred dollars ($100), at the discretion of the recorder

SEC 19 REPEAL AND DATE OF EFFECT —All ordinances and parts of ordinances in conflict with this ordinance are hereby repealed; and this ordinance shall be in full force and effect immediately upon its adoption and its publication, as provided by law

SEC 20 UNCONSTITUTIONALITY CLAUSE —Should any section, paragraph, sentence, clause, or phrase of this ordinance be declared unconstitutional or invalid for any reason, the remainder of said ordinance shall not be affected thereby Each and every violation of the provisions of this ordinance shall constitute a separate offense

APPENDIX B

UNITED STATES PUBLIC HEALTH SERVICE

Determination of Municipal Milk Sanitation Rating for City of Huntsville, Ala., as of March, 1924—Population, 10,000

PRODUCTION ITEMS

Item No	Item of sanitation	Per cent complying	Possible credit	Earned credit
1	Cows, Tuberculin testing and physical examination	100 0	75	75 00
	Dairy barns			
2	Lighting	25 1	5	1 26
3	Air space	69 8	5	3 49
4a	Floor construction	59 6	5	2 98
4b	Floor cleanliness	65 1	5	3 26
5	Walls and ceilings	44 3	5	2 21
6	Barnyard	49. 7	10	4 97
7	Manure	51 5	25	12 88
	Milk rooms.			
8a	Floors	44 7	5	2 23
8b	Walls and ceiling	25 1	5	1 26
8c	Lighting	51 3	5	2 56
8d	Screening	48 6	15	7 29
9	Cleanliness and flies	71 8	10	7 18
10	Toilets: Location, construction, and operation	87 5	20	17 50
11	Water supply Accessibility, adequacy, quality	84 3	20	16 86
	Utensils			
12	Construction	44 3	20	8 86
13	Cleaning	60 6	20	12 12
14a	Sterilization with steam	9 8	25	2 45
14b	Sterilization with boiling water	18 5	[1] (20)	3. 70
15	Storage	65 7	10	6 57
16	Handling	80 3	5	4. 02
	Milking.			
17	Udders and teats	0	20	0
18	Flanks	80 3	5	4 01
19	Hands	0	20	0
20	Clothing	72 7	5	3. 64
21	Milk stools	3. 5	5	. 18
22	Immediate removal of milk to milk house	54 1	5	2 71
	Cooling			
23a	Cooling to 50° F or under	0	25	0
23b	Cooling to between 50° F and 60° F	2 2	[1] (15)	. 33
24	Bottling and capping Method (full credit given if milk delivered in cans)	2 2	20	. 44
25	Employees Health certificates	0	25	0
	Bacterial counts			
—	Bacterial counts under 50,000 per c. c	73 2	75	54. 90
—	Bacterial counts 50,000 to 200,000 per c c	20 8	[1] (25)	5. 20
—	Bacterial counts 200,000 to 1,000,000 per c c	3. 7	[1] (10)	37
	Total possible and total earned credits for production items		500	270 43

[1] Fractional credits; not included in addition of column.

Determination of Municipal Milk Sanitation Rating for City of Huntsville, Ala., as of March, 1924—Population, 10,000—Continued

PASTEURIZATION ITEMS

Item No	Item of sanitation	Per cent comply-ing	Possible credit	Earned credit
	Buildings and equipment at pasteurization plants			
1	Floors	0 00	5	0 00
2	Walls and ceiling	00	5	00
3	Doors and windows	00	20	00
4a	Lighting	00	5	00
4b	Ventilation	00	5	.00
5	Protection from contamination and flies	00	10	.00
6	Toilet facilities	00	20	.00
7	Water supply	00	20	00
8	Wash room	00	5	00
9	Milk piping	00	10	00
10	Construction of equipment	00	10	.00
11	Disposal of wastes	00	5	00
	Methods used at pasteurization plants			
12a	Cleaning of containers and apparatus	00	20	.00
12b	Sterilization of containers and apparatus	00	25	00
13	Storage of containers	00	10	.00
14	Handling of containers and apparatus	00	10	00
15	Storage of milk-bottle caps	00	5	00
16	Pasteurization process, design and operation	00	150	.00
17	Cooling	00	25	.00
18	Bottling	00	10	00
19	Overflow milk discarded	00	5	.00
20	Capping	00	10	00
21	Delivery within 36 hours	00	5	.00
	Employees at pasteurization plants			
22	Health certificates	00	25	00
24	Cleanliness	00	5	00
	Bacterial counts after pasteurization			
—	Final bacterial counts under 50,000	00	75	00
—	Final bacterial counts 50,000 to 100,000	00	[1] (25)	00
	Total possible and total earned credits for pasteurization items		500	00

[1] Fractional credits, not included in addition of column

Computation of ratings

Per cent

Production rating = Earned production credits ÷ possible production credits = (270 43) ÷ (500) = 51. 1

Pasteurization rating = Earned pasteurization credits ÷ possible pasteurization credits = (0 0) ÷ (500) = . 0

Combined rating = Earned production and pasteurization credits ÷ 1,000 (270.43) ÷ (1,000) = 27. 0

HUNTSVILLE ALA., *March, 1924*

APPENDIX C

UNITED STATES PUBLIC HEALTH SERVICE

Determination of Municipal Milk Sanitation Rating for City of Huntsville, Ala. as of April, 1926—Population, 10,000

PRODUCTION ITEMS

Item No	Item of sanitation	Per cent comply-ing	Possible credit	Earned credit
1	Cows: Tuberculin testing and physical examination	100 00	75	75.00
	Dairy barns			
2	Lighting	89.68	5	4.48
3	Air space	100.00	5	5.00
4a	Floor construction	100 00	5	5 00
4b	Floor cleanliness	95.87	5	4 79
5	Walls and ceiling	97 25	5	4.86
6	Barnyard	100 00	10	10 00
7	Manure	100.00	25	25.00

Determination of Municipal Milk Sanitation Rating for City of Huntsville, Ala., as of April, 1926—Population, 10,000—Continued

PRODUCTION ITEMS—Continued

Item No	Item of sanitation	Per cent complying	Possible credit	Earned credit
	Milk rooms			
8a	Floors	100 00	5	5 00
8b	Walls and ceiling	100 00	5	5 00
8c	Lighting	100 00	5	5 00
8d	Screening	100.00	15	15 00
9	Cleanliness and flies	100 00	10	10.00
10	Toilets Location, construction, and operation	100 00	20	20 00
11	Water supply Accessibility, adequacy, quality	100 00	20	20 00
	Utensils			
12	Construction	100 00	20	20 00
13	Cleaning	75 65	20	15 13
14a	Sterilization with steam	75 24	25	18 81
14b	Sterilization with boiling water	24 76	[1] (20)	4 95
15	Storage	100 00	10	10 00
16	Handling	100 00	5	5 00
	Milking			
17	Udders and teats	100 00	20	20 00
18	Flanks	100 00	5	5 00
19	Hands	100 00	20	20 00
20	Clothing	100 00	5	5 00
21	Milk stools	91 75	5	4 59
22	Immediate removal of milk to milk house	100 00	5	5 00
	Cooling.			
23a	Cooling to 50° F or under	68 00	25	17 00
23b	Cooling to between 50° F and 60° F	32 00	[1] (15)	4 80
24	Bottling and capping Method (full credit given if milk delivered in cans)	100 00	20	20 00
25	Employees Health certificates	100 00	25	25 00
	Bacterial counts.			
—	Bacterial counts under 50,000 per c c	74 21	75	55 66
—	Bacterial counts 50,000 to 200,000 per c c	16 78	[1] (25)	4 20
—	Bacterial counts 200,000 to 1,000,000 per c c	9 01	[1] (10)	90
	Total possible and total earned credits for production items		500	475 17

PASTEURIZATION ITEMS

Item No	Item of sanitation	Per cent complying	Possible credit	Earned credit
	Buildings and equipment at pasteurization plants			
1	Floors	50 37	5	2 52
2	Walls and ceilings	50 37	5	2 52
3	Doors and windows	50 37	20	10 07
4a	Lighting	50.37	5	2.52
4b	Ventilation	50 37	5	2 52
5	Protection from contamination and flies	50 37	10	5 04
6	Toilet facilities	50 37	20	10 07
7	Water supply	50 37	20	10 07
8	Wash room	50 37	5	2 52
9	Milk piping	50.37	10	5 04
10	Construction of equipment	50 37	10	5 04
11	Disposal of wastes	50.37	5	2.52
	Methods used at pasteurization plants			
12a	Cleaning of containers and apparatus	50 37	20	10 07
12b	Sterilization of containers and apparatus	50 37	25	12 59
13	Storage of containers	50 37	10	5 04
14	Handling of containers and apparatus	50 37	10	5 04
15	Storage of milk-bottle caps	50 37	5	2 52
16	Pasteurization process, design and operation	50 37	150	75 56
17	Cooling	40 32	25	10 08
18	Bottling	50 37	10	5 04
19	Overflow milk discarded	50.37	5	2 52
20	Capping	50 37	10	5 04
21	Delivery within 36 hours	50 37	5	2.52
	Employees at pasteurization plants			
22	Health certificates	50.37	25	12.59
24	Cleanliness	50 37	5	2 52
	Bacterial counts after pasteurization:			
—	Final bacterial counts under 50,000	50 37	75	37 78
—	Final bacterial counts 50,000 to 100,000	00	[1](25)	.00
	Total possible and total earned credits for pasteurization items		500	249 36

[1] Fractional credits, not included in addition of column.

Computation of ratings

	Per cent
Production rating—earned production credits÷possible production credits=(475.17)÷(500)	95.0
Pasteurization rating—earned pasteurization credits÷possible pasteurization credits =(249.36)÷(500)	49.87
Combined rating—earned production and pasteurization credits÷1,000 (724.53)÷(1,000)	72.5

HUNTSVILLE, ALA., *April, 1926.*

PUBLIC HEALTH ENGINEERING ABSTRACTS

Many School Water-Supplies Found Unsatisfactory. Anon. *Public Health News, New Jersey State Department of Health*, vol. 11, No. 4, March, 1926, pp 92–95. (Abstract by E. C. Sullivan.)

More than half of 740 school water-supplies recently examined by the bureau of chemistry of the State Department of Health of New Jersey showed evidence of contamination and were classified as unsuitable for drinking purposes. This conclusion is based upon complete chemical and bacteriological examinations made, at the request of the State Department of Public Instruction, upon samples submitted by representatives of local boards of health or education. Wells, springs, and cisterns were included in the survey, embracing all types of water used in schools not receiving water from an approved public system.

Report of Committee on Mosquito Control of Sanitary Engineering Section of American Public Health Association, October 21, 1925 *American Journal of Public Health*, vol. 16, No 3, March 26, 1926, pp 258–262. (Abstract by J. A LePrince.)

This report is a summary of antimosquito activities in the United States for the year Control operations were carried on very generally in 11 States, to a limited extent in 10 States, and no control work was done in 27 States.

In New Jersey the wet and humid weather shortened the usual larval development period by two or three days, and in the Southern States the rain shortage caused marked increases in *Culex* production, owing to intensified sewage pollution of streams In New Jersey the expenditure for mosquito control was $325,000. The ditching machine now developed for use on the New Jersey marshes weighs 12 tons, has a ground pressure of only 1½ pounds per square inch, and "chews" up the sod and spreads it over an area 30 feet wide. Experiments indicate a cutting speed of 40 feet per minute and the cost per linear foot of ditch (regulation straight-sided ditch adopted as the standard in that State) as somewhat less than one-half cent.

The Florida State Antimosquito Association had a bill passed in the legislature enabling any county to organize a mosquito control district.

In Mississippi, 40 towns did control work, and in Texas, 100 communities, in addition to 68 towns on the Texas border, are engaged in *Stegomyia* control Alabama has been doing mosquito control for ten years; work is going on in 23 counties, and $33,000 was spent last year. In addition to work in rural sections of Georgia, 40 towns carried on campaigns against mosquitoes.

In California, 17 mosquito abatement districts are active, in Virginia, 25 towns are doing mosquito control work, and in Rhode Island the State has aided several communities in financing mosquito control operations. In Illinois, in Chicago and Cook County, an intensive antimosquito campaign was inaugurated by the Gorgas Memorial Institute in which boy scouts made house-yard inspections. Mosquito production was found on 40 per cent of the premises

The United States Department of Agriculture has started investigations of the salt marsh mosquito problem of the Gulf Coast. The Cotton Belt and Missouri Pacific railways are working in cooperation with cities and towns along their lines, and an antimosquito demonstration was recently conducted under the joint auspices of the Missouri Pacific Railway, Arkansas State Bankers Association, and the State Health Department of Arkansas.

Anopheles control work in the United States was started by the United States Public Health Service in 1914 in 13 States, and is now supervised by the State health departments, but the requests for advisory assistance from incorporated communities are coming in so rapidly that some State health departments can not keep up with the requests owing to insufficient personnel.

Report of Committee on Transportation of Milk and Milk Products. Russell S Smith, International Association of Dairy and Milk Inspectors *Fourteenth Annual Report,* October 12, 14, 1925, pp. 135–150 (Abstract by W. W. White)

Some of the conditions in handling milk causing economic losses which were brought to the attention of the President's Agricultural Committee by Secretary Hoover are outlined. The changes in methods of transporting milk in recent years, with an explanation of the extent of these changes, are thoroughly explained Insulated glass-enamel lined metal tanks in insulated cars are used for bulk shipments. Tanks are mounted on special cradles and anchored to the needle beam of the car. This means of transportation can be

used only where a railroad siding is available. The unit tank system was tried by railroads hauling milk to New York City, but it failed because of insufficient equipment to handle the weight.

Motor truck tanks and trailers are a recent development, and up to January 1, 1925, about 230 metal tanks were in use To avoid overweight on roads in some States semitrailers or trailers are used.

Refrigerator trucks are the latest means of hauling milk from receiving stations to the city plants. Condenser coils, compressor and compressor-motor drive are located on top of the refrigerator body.

A committee of the United States Chamber of Commerce studied the motor transportation situation and in their conclusions recommended cooperation among transportation agencies at points where further expansion would be possible Short hauls by organized motor transports will reduce yard congestion and release cars for line hauls Further development of technical equipment and public regulation of all common carriers will be necessary to insure good service.

The great improvement in transportation directs special attention to the efforts which are being made by some to reach perfection in the sanitary production, handling, and transportation of milk and milk products.

DEATHS DURING WEEK ENDED JULY 17, 1926

Summary of information received by telegraph from industrial insurance companies for week ended July 17, 1926, and corresponding week of 1925 (From the Weekly Health Index, July 21, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended July 17, 1926	Corresponding week, 1925
Policies in force	64, 955, 791	60, 539, 284
Number of death claims	12, 203	10, 541
Death claims per 1,000 policies in force, annual rate	9. 8	9. 1

Deaths from all causes in certain large cities of the United States during the week ended July 17, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, July 21, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended July 17, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended July 17, 1926 [2]
	Total deaths	Death rate [1]		Week ended July 17, 1926	Corresponding week, 1925	
Total (65 cities)	5,966	10 8	10 9	682	741	[3] 55
Akron	27			6	3	64
Albany [4]	32	14 0	15 9	2	1	42
Atlanta	72			12	10	
White	37			1		
Colored	35	[5]		11		
Baltimore [4]	186	12 0	13 3	25	31	73
White	136			13		46
Colored	50	[5]		12		195
Birmingham	59	15 6	14 5	11	12	
White	22			6		
Colored	37	[5]		5		
Boston	166	11 0	11 2	23	20	65
Bridgeport	24			1	2	17
Buffalo	132	12.7	10 2	15	16	63
Cambridge	15	6 4	10 0	0	3	0
Camden	19	7 6	14 2	1	6	17
Canton	28	13 3	9.3	2	2	44
Chicago [4]	545	9 3	9 8	44	51	39
Cincinnati	124	15 7	15 5	16	14	100
Cleveland	154	8 4	8 4	11	21	29
Columbus	63	11.5	12 7	4	11	37
Dallas	52	13 6	15 6	10	10	
White	45			8		
Colored	7	[5]		2		
Dayton	27	8 0	10 3	4	4	63
Denver	59	10 8	14.8	3	14	
Des Moines	27	9 6	11.8	2	0	33
Detroit	236	9 5	9 2	37	36	60
Duluth	11	5 1	9.4	0	4	0
El Paso	23	11 0	11.9	6	5	
Erie	19			3	1	57
Fall River [4]	20	8 0	10 9	4	6	58
Flint	26	9 9	8 4	7	1	116
Fort Worth	20	6 6	8 6	2	0	
White	17			1		
Colored	3	[5]		1		
Grand Rapids	21	7 0	12 9	2	6	29
Houston	60			9	6	
White	34			5		
Colored	26			4		
Indianapolis	59	8 4	12 2	4	9	29
White	51			3		25
Colored	8			1		55
Jersey City	50	8 2	7 4	7	5	50
Kansas City, Kans	26	11.6	12 1	3	4	52
White	21			3		63
Colored	5	[5]		0		0
Kansas City, Mo	65	9 0	11 8	6	15	
Los Angeles	196			12	25	33
Louisville	86	14 4	11.2	12	8	103
White	68			9		89
Colored	18	[5]		3		188
Lowell	18			4	4	74
Lynn	18	9 0	7.1	0	2	0

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births

[3] Data for 63 cities

[4] Deaths for week ended Friday, July 16, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population. Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Forth Worth 14, Houston 25, Kansas City, Kans, 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D C, 25.

Deaths from all causes in certain large cities of the United States during the week ended July 17, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, July 21, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended July 17, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended July 17, 1926
	Total deaths	Death rate		Week ended July 17, 1926	Corresponding week, 1925	
Memphis	75	22 1	17 6	7	14	
White	34			3		
Colored	41	(5)		4		
Milwaukee	104	10 5	10 1	19	7	88
Minneapolis	85	10 2	10 9	7	4	39
Nashville [4]	65	24 7	23 7	5	16	
White	48			4		
Colored	17	(5)		1		
New Bedford	26			6	2	104
New Haven	35	10 0	7.3	2	5	27
New Orleans	143	17.8	17.1	13	26	
White	86			9		
Colored	57	(5)		4		
New York	1,170	10.3	10.4	127	151	51
Bronx borough	147	8 5	8.4	11	16	36
Brooklyn borough	384	8.9	8.5	42	43	43
Manhattan borough	466	12.9	14 0	54	75	60
Queens borough	123	8.4	8.2	15	11	68
Richmond borough	50	18 2	12.4	5	6	88
Newark, N. J	79	9.0	8.6	10	10	48
Norfolk	35	10 5	9.9	6	7	112
White	16			3		89
Colored	19	(5)		3		149
Oakland	51	10 2	10.7	6	4	69
Oklahoma City	21			3	2	
Omaha	45	10.9	15.5	6	3	63
Paterson	34	12.4	9.2	5	2	67
Philadelphia	449	11 7	10.1	49	47	65
Pittsburgh	127	10 4	13.8	22	22	73
Portland, Oreg	68			2	1	20
Providence	55	10.4	9 5	13	4	108
Richmond	47	13 0	13.1	7	10	88
White	24			1		20
Colored	23	(5)		6		210
Rochester	64	10 4	10.2	6	3	48
St. Louis	199	12.5	11 8	22	18	
St Paul	58	12.2	9.3	5	4	44
Salt Lake City [4]	28	11 0	11.1	2	1	28
San Antonio	56	14 2	14.0	13	9	
San Diego	20	9.5	21 1	9	5	190
San Francisco	129	11.9	11 1	4	9	24
Schenectady	18	10 1	7.3	3	0	87
Seattle	66			6	3	56
Somerville	9	4.7	6.8	0	0	0
Spokane	20	13 9	11.0	2	0	47
Springfield, Mass	24	8.6	8.8	1	3	14
Syracuse	45	12.8	7.4	5	2	63
Tacoma	25	12.3	11.5	3	3	70
Toledo	53	9.4	10.5	2	6	19
Trenton	42	16 3	14 6	6	3	160
Washington, D. C	108	10.7	10 9	15	13	85
White	60			6		50
Colored	48	(5)		9		164
Waterbury	23			2	2	43
Wilmington, Del	28	11.8	6 8	6	1	141
Worcester	29	7 8	10 4	4	4	46
Yonkers	15	6 7	7.3	1	4	22
Youngstown	39	12.3	7.8	6	4	76

[4] Deaths for week ended Friday, July 16, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population. Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Kansas City, Kans., 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D C., 25

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended July 24, 1926

ALABAMA

	Cases
Cerebrospinal meningitis	1
Chicken pox	2
Diphtheria	10
Influenza	8
Lethargic encephalitis	1
Malaria	75
Measles	81
Mumps	15
Pellagra	30
Pneumonia	12
Poliomyelitis	2
Scarlet fever	7
Smallpox	9
Tetanus	2
Tuberculosis	169
Typhoid fever	112
Typhus fever	1
Whooping cough	72

ARIZONA

	Cases
Diphtheria	3
Mumps	1
Tuberculosis	3
Typhoid fever	1

ARKANSAS

	Cases
Chicken pox	2
Hookworm disease	2
Influenza	17
Malaria	112
Measles	20
Mumps	34
Paratyphoid fever	2
Pellagra	17
Scarlet fever	8
Smallpox	2
Trachoma	1
Tuberculosis	19
Typhoid fever	28
Whooping cough	50

CALIFORNIA

	Cases
Cerebrospinal meningitis—	
Alameda County	1
Los Angeles	1
Chicken pox	43
Diphtheria	102
Influenza	4
Lethargic encephalitis	2
Measles	152
Mumps	50
Poliomyelitis—	
Los Angeles	1
Orange County	1
Scarlet fever	59
Smallpox	10
Tuberculosis	136
Typhoid fever	15
Whooping cough	48

COLORADO

	Cases
Chicken pox	6
Diphtheria	12
Influenza	1
Measles	8
Pneumonia	2
Scarlet fever	4
Tuberculosis	31
Typhoid fever	4
Vincent's angina	8
Whooping cough	31

CONNECTICUT

	Cases
Chicken pox	18
Diphtheria	9
Dysentery (bacillary)	1
German measles	48
Pneumonia (broncho)	7
Pneumonia (lobar)	12
Scarlet fever	21
Tuberculosis (all forms)	36
Typhoid fever	2
Whooping cough	45

DELAWARE

	Cases
Chicken pox	1
Diphtheria	1
Measles	1
Mumps	1
Scarlet fever	3
Tuberculosis	4
Typhoid fever	1
Whooping cough	6

DISTRICT OF COLUMBIA

Cerebrospinal meningitis	1
Chicken pox	2
Diphtheria	8
Measles	14
Pneumonia	7
Scarlet fever	4
Tuberculosis	24
Typhoid fever	2
Whooping cough	16

FLORIDA

Chicken pox	2
Diphtheria	10
Influenza	2
Malaria	2
Measles	7
Mumps	6
Paratyphoid fever	1
Scarlet fever	1
Smallpox	7
Tuberculosis	44
Typhoid fever	1
Whooping cough	43

GEORGIA

Chicken pox	1
Conjunctivitis (acute)	1
Dengue	1
Diphtheria	5
Dysentery	18
Influenza	15
Malaria	55
Measles	12
Mumps	4
Paratyphoid fever	5
Pellagra	11
Pneumonia	10
Poliomyelitis	2
Scarlet fever	1
Smallpox	8
Tetanus	1
Tuberculosis	9
Typhoid fever	74
Whooping cough	21

IDAHO

Chicken pox	4
Measles	5
Scarlet fever	9
Smallpox	5
Tuberculosis	2
Typhoid fever	1
Whooping cough	2

ILLINOIS

	Cases
Cerebrospinal meningitis—Jackson County	1
Chicken pox	116
Diphtheria	62
Influenza	56
Lethargic encephalitis—Lawrence County	1
Measles	349
Mumps	22
Pneumonia	152
Poliomyelitis—Rock Island County	1
Scarlet fever	103
Smallpox	
Champaign County	11
Scattering	9
Tuberculosis	270
Typhoid fever	32
Whooping cough	242

INDIANA

Chicken pox	18
Diphtheria	24
Influenza	7
Measles	69
Pneumonia	1
Poliomyelitis	1
Scarlet fever	25
Smallpox	24
Tuberculosis	50
Typhoid fever	19
Whooping cough	98

IOWA

Chicken pox	1
Diphtheria	9
German measles	5
Measles	14
Scarlet fever	16
Smallpox	16
Tuberculosis	32
Typhoid fever	5
Whooping cough	19

KANSAS

Chicken pox	4
Diphtheria	13
Influenza	5
Measles	37
Mumps	4
Pneumonia	7
Scarlet fever	17
Smallpox	8
Tuberculosis	45
Typhoid fever	21
Whooping cough	73

LOUISIANA

Anthrax	1
Diphtheria	2
Influenza	72
Leprosy	1
Malaria	20
Pellagra	6
Pneumonia	16
Scarlet fever	3
Smallpox	3
Tuberculosis	26
Typhoid fever	48
Whooping cough	17

MAINE

	Cases
Chicken pox	10
Diphtheria	3
Measles	43
Mumps	5
Pneumonia	3
Scarlet fever	7
Tetanus	4
Tuberculosis	8
Whooping cough	14

MARYLAND [1]

	Cases
Chicken pox	16
Diphtheria	8
Dysentery	9
Influenza	2
Malaria	2
Measles	54
Mumps	26
Paratyphoid fever	1
Poliomyelitis	4
Scarlet fever	19
Septic sore throat	1
Tetanus	2
Trachoma	2
Tuberculosis	77
Typhoid fever	15
Vincent's angina	1
Whooping cough	88

MASSACHUSETTS

	Cases
Cerebrospinal meningitis	1
Chicken pox	79
Conjunctivitis (suppurative)	7
Diphtheria	43
German measles	19
Influenza	5
Lethargic encephalitis	2
Malaria	2
Measles	139
Mumps	58
Ophthalmia neonatorum	17
Pellagra	2
Pneumonia (lobar)	13
Poliomyelitis	5
Scarlet fever	95
Septic sore throat	3
Tetanus	3
Tuberculosis (pulmonary)	105
Tuberculosis (other forms)	38
Typhoid fever	9
Whooping cough	123

MICHIGAN

	Cases
Diphtheria	70
Measles	113
Pneumonia	44
Scarlet fever	143
Smallpox	9
Tuberculosis	46
Typhoid fever	14
Whooping cough	178

MINNESOTA

	Cases
Chicken pox	16
Diphtheria	27
Influenza	4
Measles	92
Pneumonia	2
Scarlet fever	102
Smallpox	1
Tuberculosis	51
Typhoid fever	6
Whooping cough	14

[1] Week ended Friday.

MISSISSIPPI

	Cases
Diphtheria	3
Poliomyelitis	1
Scarlet fever	1
Typhoid fever	59

MISSOURI

(Exclusive of Kansas City)

	Cases
Cerebrospinal meningitis	3
Chicken pox	4
Diphtheria	33
Measles	31
Mumps	1
Scarlet fever	14
Smallpox	1
Tetanus	2
Trachoma	3
Tuberculosis	28
Typhoid fever	17
Whooping cough	40

MONTANA

	Cases
Diphtheria	1
Measles	15
Mumps	2
Scarlet fever	16
Smallpox	5
Tuberculosis	10

NEBRASKA

	Cases
Chicken pox	5
Diphtheria	3
Measles	3
Mumps	5
Pneumonia	4
Scarlet fever	12
Septic sore throat	1
Smallpox	4
Tuberculosis	17
Typhoid fever	1
Whooping cough	10

NEW JERSEY

	Cases
Anthrax	2
Chicken pox	50
Diphtheria	44
Dysentery	1
Influenza	5
Malaria	1
Measles	97
Paratyphoid fever	1
Pneumonia	25
Poliomyelitis	1
Scarlet fever	59
Typhoid fever	7
Whooping cough	102

NEW MEXICO

	Cases
Chicken pox	1
Conjunctivitis	3
Diphtheria	4
Measles	1
Mumps	1
Tuberculosis	28
Typhoid fever	13
Whooping cough	13

NEW YORK

(Exclusive of New York City)

Chicken pox	94
Diphtheria	57
German measles	35
Influenza	1
Lethargic encephalitis	5
Malaria	3
Measles	554
Mumps	40
Ophthalmia neonatorum	1
Pneumonia	63
Poliomyelitis	12
Scarlet fever	62
Septic sore throat	1
Smallpox	13
Tetanus	1
Typhoid fever	8
Vincent's angina	16
Whooping cough	228

NORTH CAROLINA

Cerebrospinal meningitis	2
Chicken pox	13
Diphtheria	12
German measles	10
Malaria	1
Measles	110
Poliomyelitis	8
Scarlet fever	14
Septic sore throat	2
Smallpox	13
Typhoid fever	64
Whooping cough	328

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Cerebrospinal meningitis—Ottawa County	1
Chicken pox	4
Diphtheria	5
Influenza	23
Malaria	73
Measles	10
Mumps	1
Pellagra	34
Pneumonia	5
Scarlet fever	11
Smallpox	3
Typhoid fever	104
Whooping cough	52

OREGON

Cerebrospinal meningitis	1
Chicken pox	14
Diphtheria	18

OREGON—continued

	Cases
Influenza	13
Malaria	1
Measles	23
Mumps	12
Pneumonia	[2] 4
Poliomyelitis	1
Scarlet fever	16
Smallpox	14
Tuberculosis	[2] 2
Typhoid fever	2
Whooping cough	34

PENNSYLVANIA

Actinomycosis—Philadelphia	1
Cerebrospinal meningitis	
Homestead	1
Pittsburgh	1
Scranton	1
Chicken pox	171
Diphtheria	120
German measles	17
Lethargic encephalitis—Pittsburgh	1
Measles	826
Mumps	21
Ophthalmia neonatorum.	
Hampton Township [3]	1
Philadelphia	1
Pneumonia	46
Rabies—Scranton	1
Scarlet fever	220
Smallpox	1
Tetanus	
Heidelburg Township [3]	1
Philadelphia	3
Trachoma—Erie	1
Tuberculosis	124
Typhoid fever	27
Whooping cough	476

RHODE ISLAND

Cerebrospinal meningitis—Providence	1
Chicken pox	3
Diphtheria	2
German measles	5
Lethargic encephalitis—Providence	1
Measles	18
Ophthalmia neonatorum	1
Pneumonia	3
Scarlet fever	5
Tuberculosis	13
Typhoid fever	2
Whooping cough	8

SOUTH DAKOTA

Chicken pox	2
Diphtheria	14
Measles	4
Mumps	3
Scarlet fever	19
Smallpox	3
Typhoid fever	3
Whooping cough	10

TENNESSEE

Chicken pox	8
Diphtheria	1
Dysentery	3

[2] Deaths

[3] County not specified.

TENNESSEE—continued

	Cases
Influenza	8
Malaria	63
Measles	15
Ophthalmia neonatorum	3
Pellagra	12
Pneumonia	7
Rabies	1
Scarlet fever	12
Smallpox	1
Tetanus	1
Trachoma	1
Tuberculosis	37
Typhoid fever	40
Whooping cough	56

TEXAS

Chicken pox	10
Diphtheria	11
Dysentery	6
Influenza	5
Measles	7
Mumps	10
Paratyphoid fever	1
Pellagra	2
Pneumonia	6
Poliomyelitis	6
Scarlet fever	11
Smallpox	10
Tuberculosis	31
Typhoid fever	32
Typhus fever	3
Whooping cough	57

UTAH

Chicken pox	4
Diphtheria	3
Measles	2
Mumps	5
Smallpox	1
Whooping cough	48

VERMONT

Chicken pox	9
Diphtheria	3
Measles	19
Mumps	2
Scarlet fever	1
Whooping cough	34

WASHINGTON

Cerebrospinal meningitis	
Kitsap County	1
Spokane	1
Spokane County	1
Chicken pox	26
Diphtheria	28
German measles	5
Impetigo contagiosa	1
Influenza	1
Measles	29

WASHINGTON—continued

	Cases
Mumps	29
Pneumonia	1
Poliomyelitis	1
Scarlet fever	22
Smallpox	19
Tuberculosis	5
Typhoid fever	6
Whooping cough	27

WEST VIRGINIA

Chicken pox	11
Diphtheria	10
Influenza	1
Measles	69
Scarlet fever	17
Smallpox	13
Tuberculosis	22
Typhoid fever	14
Whooping cough	75

WISCONSIN

Milwaukee	
Cerebrospinal meningitis	1
Chicken pox	12
Diphtheria	10
German measles	2
Influenza	2
Measles	87
Mumps	11
Pneumonia	10
Scarlet fever	2
Tuberculosis	15
Typhoid fever	1
Whooping cough	90
Scattering	
Cerebrospinal meningitis	2
Chicken pox	23
Diphtheria	12
German measles	15
Influenza	5
Measles	495
Mumps	9
Pneumonia	5
Poliomyelitis	1
Scarlet fever	48
Smallpox	5
Tuberculosis	23
Typhoid fever	5
Whooping cough	168

WYOMING

Chicken pox	2
Measles	1
Mumps	2
Rocky Mountain spotted fever	
Park County	1
Sheridan County	1
Scarlet fever	1
Typhoid fever	2
Whooping cough	3

Reports for Week Ended July 17, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	3
Diphtheria	2
Measles	31
Pneumonia	6
Poliomyelitis	1
Scarlet fever	7
Tuberculosis	6
Typhoid fever	2
Whooping cough	23

NORTH DAKOTA

	Cases
Diphtheria	8
German measles	1
Measles	14
Mumps	8
Pneumonia	9
Scarlet fever	21
Smallpox	2
Tuberculosis	1
Typhoid fever	1
Whooping cough	13

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
June, 1926										
Arkansas	1	6	54	248	145	93	0	38	6	63
District of Columbia	1	38	1	--------	519	2	0	71	4	2
Illinois	8	367	334	6	4,813	1	6	947	105	95
Louisiana	0	30	75	79	21	39	1	30	55	103
Maryland	3	68	25	1	878	2	1	254	2	46
Michigan	--------	434	4	0	3,957	--------	3	1,189	30	38
Minnesota	4	245	7	--------	2,489	--------	0	851	23	19
Mississippi	1	34	456	8,082	1,143	1,372	6	21	35	264
Missouri	6	250	19	3	1,845	0	0	410	32	45
New Jersey	11	319	10	1	2,955	--------	2	702	3	37
New Mexico	1	17	0	1	29	3	2	13	0	16
New York	7	618	279	23	10,110	--------	12	1,815	29	85
North Carolina	2	74	--------	--------	1,520	--------	7	82	127	87
Ohio	7	335	82	1	4,042	0	4	1,078	152	57
Oklahoma [1]	2	19	107	165	261	74	4	51	26	109
Rhode Island	1	18	8	--------	274	--------	0	26	0	2
South Carolina	0	126	463	1,225	119	512	13	34	79	335
West Virginia	0	33	21	--------	1,875	1	1	92	36	23

[1] Exclusive of Oklahoma City and Tulsa

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended July 10, 1926, 37 States reported 954 cases of diphtheria. For the week ended July 11, 1925, the same States reported 883 cases of this disease. Ninety-nine cities, situated in all parts of the country and having an aggregate population of more than 29,000,000, reported 549 cases of diphtheria for the week ended July 10, 1926. Last year for the corresponding week they reported 505 cases. The estimated expectancy for these cities was 628 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles—Thirty-four States reported 5,336 cases of measles for the week ended July 10, 1926, and 1,967 cases of this disease for the week ended July 11, 1925 Ninety-nine cities reported 1,757 cases of measles for the week this year, and 1,058 cases last year.

Poliomyelitis—The health officers of 37 States reported 37 cases of poliomyelitis for the week ended July 10, 1926. The same States reported 90 cases for the week ended July 11, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-seven States—this year, 1,803 cases; last year, 1,103 cases; 99 cities—this year, 682 cases; last year, 477 cases; estimated expectancy, 367 cases.

Smallpox.—For the week ended July 10, 1926, 37 States reported 310 cases of smallpox. Last year for the corresponding week they reported 305 cases. Ninety-nine cities reported smallpox for the week as follows: 1926, 42 cases; 1925, 90 cases; estimated expectancy, 56 cases One death from smallpox was reported by these cities for the week this year—at Omaha, Nebr.

Typhoid fever—Six hundred and twenty-eight cases of typhoid fever were reported for the week ended July 10, 1926, by 36 States. For the corresponding week of 1925 the same States reported 1,016 cases of this disease. Ninety-nine cities reported 76 cases of typhoid fever for the week this year and 186 cases for the corresponding week last year. The estimated expectancy for these cities was 131 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 93 cities, with a population of more than 28,350,000, as follows; 1926, 388 deaths; 1925, 328.

City reports for week ended July 10, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	1	0	0	0	0	1	0	0
New Hampshire									
Concord	22,546	0	0	0	0	0	1	0	1
Manchester	83,097	0	1	0	0	0	0	0	0
Vermont									
Barre	10,008	0	0	0	0	0	0	0	0
Burlington	24,089	0	0	0	0	0	11	0	0
Massachusetts									
Boston	779,620	12	42	19	0	0	48	29	8
Fall River	128,993	1	3	1	0	0	0	0	3
Springfield	142,065	0	2	1	1	1	0	0	0
Worcester	190,757	5	2	1	0	0	1	0	4

City reports for week ended July 10, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND—con									
Rhode Island									
Pawtucket	69, 760	0	1	0	0	0	2	0	0
Providence	267, 918	0	4	0	0	0	29	2	1
Connecticut									
Bridgeport	(1)	2	4	0	0	1	0	1	1
Hartford	160, 197	1	4	0	0	1	4	0	3
New Haven	178, 927	1	2	2	0	0	18	0	2
MIDDLE ATLANTIC									
New York									
Buffalo	538, 016	18	9	0	0	0	0	0	5
New York	5, 873, 356	101	196	148	22	1	107	36	88
Rochester	316, 786	1	5	6	0	0	9	1	1
Syracuse	182, 003	6	4	0	0	0	114	3	3
New Jersey									
Camden	128, 642	2	2	1	0	0	5	0	2
Newark	452, 513	23	11	8	1	0	35	5	5
Trenton	132, 020	1	3	1	1	0	4	3	2
Pennsylvania									
Philadelphia	1, 979, 364	34	46	72	--------	2	66	3	28
Pittsburgh	631, 563	14	14	5	--------	0	74	1	12
Reading	112, 707	2	2	0	--------	0	10	0	0
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409, 333	3	6	9	0	1	59	7	5
Cleveland	936, 485	42	17	39	0	2	8	0	13
Columbus	279, 836	9	2	13	0	0	13	0	3
Toledo	287, 380	25	5	2	0	0	69	0	1
Indiana									
Fort Wayne	97, 846	1	2	1	0	0	17	0	2
Indianapolis	358, 819	7	4	1	0	0	2	0	9
South Bend	80, 091	0	0	1	0	0	18	0	1
Terre Haute	71, 071	1	1	0	0	0	1	0	2
Illinois									
Chicago	2, 995, 239	71	73	37	2	6	255	11	31
Peoria	81, 564	1	0	0	0	0	3	3	1
Springfield	63, 923	0	0	1	0	0	3	2	1
Michigan									
Detroit	1, 245, 824	--------	31	--------	--------	--------	--------	--------	--------
Flint	130, 316	4	3	0	0	0	44	0	3
Grand Rapids	153, 698	3	3	1	0	0	27	0	3
Wisconsin									
Kenosha	50, 891	1	1	0	0	0	61	0	0
Madison	46, 385	13	0	0	0	0	14	0	0
Milwaukee	509, 192	42	11	8	1	1	124	12	5
Racine	67, 707	1	0	0	0	0	60	0	2
Superior	39, 671	0	0	1	0	0	1	0	1
WEST NORTH CENTRAL									
Minnesota:									
Duluth	110, 502	1	0	2	0	0	27	0	0
Minneapolis	425, 435	18	10	14	0	0	10	0	9
St Paul	246, 001	3	10	7	0	0	82	1	6
Iowa									
Davenport	52, 469	1	0	1	0	--------	2	0	--------
Sioux City	76, 411	0	0	2	0	--------	0	0	--------
Waterloo	36, 771	4	0	0	0	--------	19	0	--------
Missouri									
Kansas City	367, 481	1	3	1	0	0	9	0	6
St Joseph	78, 342	0	0	1	0	0	1	0	1
St Louis	821, 543	6	21	19	0	0	42	0	--------
North Dakota									
Fargo	26, 403	4	0	0	0	0	4	2	0
Grand Forks	14, 811	--------	0	--------	--------	--------	--------	--------	--------
South Dakota									
Aberdeen	15, 036	0	0	0	0	--------	4	1	--------
Sioux Falls	30, 127	--------	0	--------	--------	--------	--------	--------	--------

[1] No estimate made.

City reports for week ended July 10, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST NORTH CENTRAL—continued									
Nebraska									
Lincoln	60,941	3	0	0	0	0	2	0	2
Omaha	211,768	5	3	0	0	0	11	0	3
Kansas									
Topeka	55,411	3	0	0	0	0	1	0	0
Wichita	88,367	1	0	0	0	0	1	0	0
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049		0	1	0	0	1		2
Maryland									
Baltimore	796,296	19	11	11	1	0	13	15	10
Cumberland	33,741	0	0	0	0	0	1	0	0
Frederick	12,035		0						
District of Columbia									
Washington	497,906	8	4	15	3	0	34	0	4
Virginia									
Lynchburg	30,395	1	0	3	0	0	9	1	0
Norfolk	(1)	1	0	0	0	0	9	0	3
Richmond	186,403	1	1	3	0	0	50	3	1
Roanoke	58,208	0	0	0	0	0	4	0	0
West Virginia									
Charleston	49,019	0	0	0	0	0	1	0	1
Huntington	63,485	0	0	0	0	0	0	0	0
Wheeling	56,208	0	1	0	0	0	14	0	0
North Carolina									
Raleigh	30,371	5	0	0	0	0	0	0	2
Wilmington	37,061	0	0	0	0	0	0	0	2
Winston-Salem	69,031	1	0	1	0	0	11	0	0
South Carolina									
Charleston	73,125	0	0	0	4	0	0	0	0
Columbia	41,225	0	0	0	0	0	0	1	0
Greenville	27,311	0	0	0	0	0	0	0	0
Georgia									
Atlanta	(1)	0	2	1	2	0	7	11	6
Brunswick	16,809	0	0	0	0	0	2	0	0
Savannah	93,134	0	1	0	0	0	0	0	2
Florida									
Miami	69,754	0		1	0	0	0	1	0
St Petersburg	26,847		0			0			1
Tampa	94,743	0	0	0	0	0	0	0	5
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	0	0	0	0	0	0	1
Louisville	305,935	2	2	0	0	0	5	0	6
Tennessee									
Memphis	174,533	1	1	0	0	1	24	0	3
Nashville	136,220	0	0	0	0	2	1	0	3
Alabama									
Birmingham	205,670	1	1	0	1	0	23	4	9
Mobile	65,955	0	0	0	0	0	0	0	1
Montgomery	46,481	0	1	1	0	0	2	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	0	0	0		1	0	
Little Rock	74,216	0	0	0	0	0	4	0	2
Louisiana									
New Orleans	414,493	0	5	4	1	0	0	0	0
Shreveport	57,857	0	0	1	0	0	0	0	0
Oklahoma									
Oklahoma City	(1)	0	1	0	0	0	0	0	3
Texas									
Dallas	194,450	3	2	1	1	1	2	0	6
Galveston	48,375	0	1	0	0	0	0	0	0
Houston	164,954	0	1	2	0	0	0	0	1
San Antonio	198,069	0	1	2	0	0	4	0	3

[1] No estimate made.

City reports for week ended July 10, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
MOUNTAIN									
Montana									
Billings	17,971	0	0	0	0	0	3	0	1
Great Falls	29,883	1	1	0	0	0	5	0	0
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	0	0	0	0	0	0	0	0
Idaho									
Boise	23,042	0	0	0	0	0	0	0	0
Colorado									
Denver	280,911	15	8	8	0	0	15	1	2
Pueblo	43,787	0	1	1	0	0	1	0	1
New Mexico									
Albuquerque	21,000	1	0	1	0	0	0	0	1
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	1
Utah									
Salt Lake City	130,948	4	3	4	0	0	5	9	0
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	3	4	4	0	--------	14	3	--------
Spokane	108,897	14	1	10	0	--------	19	0	--------
Tacoma	104,455	4	2	4	0	0	6	0	1
Oregon									
Portland	282,383	2	5	8	0	0	21	1	3
California									
Los Angeles	(1)	28	34	36	3	1	20	16	9
Sacramento	72,260	0	2	0	0	0	2	2	1
San Francisco	557,530	13	12	13	0	0	64	7	4

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine.											
Portland	1	0	0	0	0	0	1	0	0	0	11
New Hampshire.											
Concord	0	1	0	0	0	2	0	0	0	0	7
Manchester	1	0	0	0	0	0	0	0	0	0	9
Vermont:											
Barre	0	0	0	0	0	1	0	0	0	0	2
Burlington	1	0	0	0	0	1	0	0	0	0	5
Massachusetts											
Boston	22	41	0	0	0	15	2	0	0	37	183
Fall River	1	1	0	0	0	1	1	1	1	0	30
Springfield	2	2	0	0	0	3	0	0	0	4	32
Worcester	3	4	0	0	0	4	0	1	0	0	41
Rhode Island											
Pawtucket	1	0	0	0	0	1	0	0	0	0	13
Providence	3	3	0	0	0	1	1	0	0	43	48
Connecticut:											
Bridgeport	3	6	0	0	0	1	0	0	0	0	26
Hartford	2	7	0	0	0	2	1	2	0	7	30
New Haven	1	2	0	0	0	0	1	0	0	5	45

[1] No estimate made.

City reports for week ended July 10, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
MIDDLE ATLANTIC											
New York											
Buffalo	11	7	0	0	0	13	1	0	1	10	130
New York	68	173	0	1	0	98 [1]	20	11	3	60	1,15
Rochester	5	5	0	0	0	2	0	0	0	13	63
Syracuse	4	1	0	0	0	1	0	1	0	31	37
New Jersey											
Camden	1	5	0	0	0	0	1	0	0	0	27
Newark	9	14	0	0	0	8	1	1	0	25	91
Trenton	1	0	0	0	0	7	0	0	1	0	34
Pennsylvania											
Philadelphia	34	35	0	0	0	34	6	1	2	72	455
Pittsburgh	12	13	0	0	0	6	2	0	0	58	112
Reading	0	6	0	0	0	0	1	0	0	6	21
EAST NORTH CENTRAL											
Ohio											
Cincinnati	4	5	0	0	0	12	1	1	0	12	147
Cleveland	11	36	2	1	0	20	2	0	0	71	177
Columbus	2	4	0	1	0	12	1	0	0	9	86
Toledo	6	8	1	0	0	3	1	0	0	54	61
Indiana											
Fort Wayne	1	3	0	4	0	0	0	0	0	6	33
Indianapolis	3	2	2	5	0	4	1	0	0	24	92
South Bend	1	3	0	0	0	0	0	1	0	0	16
Terre Haute	1	0	0	0	0	2	0	0	0	2	20
Illinois											
Chicago	40	77	2	0	0	46	4	1	0	42	624
Peoria	1	0	1	0	0	0	0	0	0	10	18
Springfield	1	0	1	0	0	1	0	0	0	15	20
Michigan											
Detroit	33	--------	4	--------	--------	--------	4	--------	--------	--------	--------
Flint	2	1	1	0	0	0	0	0	0	4	24
Grand Rapids	3	10	0	0	0	1	0	0	0	4	29
Wisconsin											
Kenosha	1	0	2	0	0	0	0	0	0	8	4
Madison	0	0	0	0	0	0	0	0	0	4	11
Milwaukee	18	10	2	0	0	5	0	2	1	49	102
Racine	2	0	0	0	0	0	0	0	0	6	8
Superior	1	0	2	0	0	0	0	0	0	0	11
WEST NORTH CENTRAL											
Minnesota:											
Duluth	2	9	1	0	0	3	0	1	0	5	23
Minneapolis	11	41	4	0	0	5	1	2	2	4	94
St Paul	8	11	2	1	0	7	1	0	0	24	68
Iowa											
Davenport	0	1	1	0	--------	--------	0	0	--------	0	--------
Sioux City	1	4	0	5	--------	--------	0	0	--------	1	--------
Waterloo	0	0	0	0	--------	--------	0	0	--------	4	--------
Missouri											
Kansas City	2	0	1	0	0	10	1	0	0	9	80
St. Joseph	0	0	0	0	0	1	0	0	1	0	28
St Louis	9	20	1	2	0	8	4	1	0	34	218
North Dakota											
Fargo	0	0	0	0	0	0	1	0	0	2	10
Grand Forks	0	--------	1	--------	--------	--------	0	--------	--------	--------	--------
South Dakota											
Aberdeen	0	1	0	0	--------	--------	0	0	--------	10	--------
Sioux Falls	0	--------	1	--------	--------	--------	0	--------	--------	--------	--------
Nebraska											
Lincoln	0	1	0	1	0	1	0	0	0	12	13
Omaha	1	12	3	6	1	3	1	0	0	0	48
Kansas											
Topeka	0	5	0	0	0	0	1	4	0	11	10
Wichita	1	0	2	0	0	1	1	0	0	9	32

[1] Pulmonary tuberculosis only

City reports for week ended July 10, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
SOUTH ATLANTIC											
Delaware											
Wilmington	1	1	0	0	0	1	0	0	0	--------	30
Maryland											
Baltimore	8	16	0	0	0	9	4	3	1	69	184
Cumberland	0	0	0	0	0	0	1	0	0	0	10
Frederick	0	--------	0	--------	--------	--------	0	--------	--------	--------	--------
Dist. of Columbia											
Washington	6	5	0	0	0	9	3	0	0	27	136
Virginia											
Lynchburg	0	0	0	0	0	0	1	0	0	13	11
Norfolk	0	2	0	2	0	3	2	0	0	26	--------
Richmond	1	3	0	0	0	3	2	0	0	2	72
Roanoke	0	0	0	0	0	2	1	0	0	0	27
West Virginia											
Charleston	1	0	1	0	0	0	2	0	0	1	22
Huntington	0	0	0	0	0	1	0	0	0	0	12
Wheeling	1	1	0	0	0	0	1	1	0	0	13
North Carolina											
Raleigh	0	0	0	0	0	1	0	2	0	10	21
Wilmington	0	2	0	0	0	0	0	1	0	17	17
Winston-Salem	0	0	1	0	0	0	3	1	0	0	21
South Carolina											
Charleston	0	0	0	0	0	1	2	1	2	1	19
Columbia	0	1	0	0	0	0	2	0	0	0	0
Greenville	0	0	0	0	0	0	1	1	0	0	9
Georgia:											
Atlanta	2	0	3	1	0	2	3	10	1	3	--------
Brunswick	0	0	0	0	0	1	1	0	0	0	2
Savannah	1	0	0	0	0	4	2	0	0	0	35
Florida											
Miami	--------	0	--------	0	0	1	--------	4	0	6	32
St. Petersburg	0	--------	0	--------	0	0	0	--------	0	--------	11
Tampa	1	3	0	2	0	2	0	3	0	0	35
EAST SOUTH CENTRAL											
Kentucky											
Covington	0	0	0	0	0	2	0	0	0	0	20
Louisville	1	3	1	0	0	5	3	3	1	6	110
Tennessee											
Memphis	1	3	0	0	0	5	4	3	0	11	81
Nashville	1	1	0	0	0	3	5	3	2	14	73
Alabama											
Birmingham	0	0	1	0	0	4	4	0	0	23	82
Mobile	0	0	0	0	0	2	1	0	0	0	21
Montgomery	0	3	1	0	0	0	1	1	0	3	6
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	1	0	--------	--------	0	0	--------	2	--------
Little Rock	0	0	0	0	0	11	2	0	0	0	--------
Louisiana:											
New Orleans	1	5	1	1	0	0	5	2	0	2	--------
Shreveport	0	0	1	0	0	1	2	1	0	4	21
Oklahoma											
Oklahoma	0	0	0	0	0	0	2	5	0	2	22
Texas											
Dallas	1	1	0	0	0	3	3	4	0	11	77
Galveston	0	0	0	0	0	0	0	0	0	0	10
Houston	0	1	0	0	0	6	2	0	2	0	58
San Antonio	0	1	0	0	0	7	1	0	0	0	56
MOUNTAIN											
Montana:											
Billings	0	0	0	0	0	0	0	0	0	0	7
Great Falls	1	0	1	0	0	0	0	0	0	0	6
Helena	0	0	0	0	0	0	0	0	0	0	4
Missoula	0	0	1	0	0	0	0	0	0	0	7

City reports for week ended July 10, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
MOUNTAIN—con											
Idaho											
Boise	0	1	1	1	0	0	0	0	0	0	4
Colorado:											
Denver	6	3	2	0	0	6	1	0	0	17	53
Pueblo	0	0	0	0	0	0	1	0	0	0	7
New Mexico											
Albuquerque	0	1	0	0	0	5	0	0	0	2	25
Arizona											
Phoenix	0	0	0	0	0	7	0	0	0	0	28
Utah											
Salt Lake City	2	2	1	0	0	2	1	0	0	44	38
Nevada											
Reno	0	0	0	0	0	0	0	0	0	0	1
PACIFIC											
Washington											
Seattle	5	6	3	0			0	2		4	
Spokane	2	12	3	1			0	0		6	
Tacoma	1	1	2	5	0	1	0	0	0	0	20
Oregon											
Portland	3	9	6	13	0	4	0	2	0	0	57
California											
Los Angeles	10	12	3	3	0	21	4	1	1	5	195
Sacramento	1	1	0	0	0	6	1	2	0	1	26
San Francisco	7	13	1	0	0	10	1	0	0	2	139

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts									
Boston	1	1	0	0	0	0	0	0	0
Fall River	0	0	0	0	0	0	0	1	1
Springfield	0	0	1	0	0	0	0	0	0
Connecticut									
New Haven	0	0	0	1	0	0	0	0	0
MIDDLE ATLANTIC									
New York									
New York [1]	4	1	4	6	0	0	3	5	1
Rochester	0	0	0	0	0	0	0	1	0
New Jersey									
Newark	1	0	0	0	0	0	0	0	0
Pennsylvania									
Philadelphia	0	0	1	0	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	1	1	0	1	0	0	0	0	0
Cleveland	0	0	0	0	0	0	0	0	1
Columbus	0	0	0	1	0	0	0	0	0
Toledo	1	1	0	0	0	0	0	0	0
Illinois									
Chicago	1	0	0	0	0	0	1	0	0
WEST NORTH CENTRAL									
Missouri									
St. Louis	1	0	0	0	0	0	0	0	0
Kansas:									
Topeka	0	0	1	0	0	0	0	0	0

[1] Typhus fever, 1 case at New York City.

City reports for week ended July 10, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
SOUTH ATLANTIC									
District of Columbia									
Washington	0	0	0	0	1	1	0	0	0
North Carolina									
Winston-Salem	0	0	0	0	0	0	0	2	0
South Carolina									
Charleston [2]	0	0	0	0	11	0	0	0	0
Florida									
St Petersburg	0	0	0	0	0	1	0	0	0
EAST SOUTH CENTRAL									
Tennessee									
Memphis	0	0	0	0	0	1	0	1	0
Nashville	0	0	0	0	2	1	0	0	0
Alabama									
Montgomery	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	4	0	0	0
Louisiana									
New Orleans	0	0	0	0	1	0	0	0	0
Shreveport	0	0	0	0	0	1	0	0	1
Texas									
Dallas	1	1	0	0	3	1	0	4	0
Houston	0	0	0	0	1	3	0	0	0
San Antonio	0	0	0	0	0	1	0	0	0
MOUNTAIN									
Utah									
Salt Lake City	0	1	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	1	0	0	0	0	0	0	0	0
Spokane	1	0	0	0	0	0	0	0	0
Tacoma	1	1	0	0	0	0	0	0	0
Oregon									
Portland	0	1	0	0	0	0	0	0	0
California									
Los Angeles	0	0	0	0	0	0	0	3	1
San Francisco	0	0	0	0	0	1	0	0	0

[2] Dengue, 1 case at Charleston, S. C.

The following table gives the rates per 100,000 population for 103 cities for the five-week period ended July 10, 1926, compared with those for a like period ended July 11, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 103 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,-750,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, June 6 to July 10, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	June 13, 1925	June 12 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926
103 cities	116	[2] 136	114	[2] 113	112	[2] 131	[3] 92	[4] 122	93	[5] 99
New England	91	69	93	78	122	59	113	64	60	57
Middle Atlantic	155	155	166	124	163	152	95	163	126	120
East North Central	89	146	86	131	78	161	81	117	83	[6] 93
West North Central	141	[2] 231	129	[2] 167	111	[2] 195	127	[7] 125	90	[7] 93
South Atlantic	54	60	48	68	69	45	38	83	52	[8] 66
East South Central	11	26	5	16	32	10	5	[9] 22	21	5
West South Central	66	47	70	43	44	43	57	47	35	43
Mountain	176	127	185	146	102	118	176	155	102	118
Pacific	157	159	108	102	102	132	[3] 138	129	119	181

MEASLES CASE RATES

	June 13, 1925	June 12 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926
103 cities	558	[2] 928	416	[2] 734	292	[2] 617	[3] 225	[4] 435	186	[5] 315
New England	860	659	611	494	393	425	338	319	273	246
Middle Atlantic	724	707	542	585	380	476	257	313	248	211
East North Central	779	1,018	547	943	377	828	300	634	210	[6] 536
West North Central	131	[2] 2,038	84	[2] 1,260	58	[2] 635	30	[7] 604	34	[7] 417
South Atlantic	280	1,103	330	825	263	701	248	436	200	[8] 294
East South Central	194	1,396	105	695	121	612	89	[9] 430	110	285
West South Central	13	125	18	77	4	95	4	52	0	47
Mountain	92	919	74	701	92	792	37	437	53	264
Pacific	83	593	80	582	50	485	[3] 35	461	39	337

SCARLET FEVER CASE RATES

	June 13, 1925	June 12 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926
103 cities	170	[2] 261	159	[2] 233	113	[2] 212	[3] 95	[4] 170	87	[5] 122
New England	173	255	137	203	103	236	108	187	141	158
Middle Atlantic	155	195	111	221	99	210	79	188	81	129
East North Central	108	333	202	340	146	253	114	187	91	[6] 125
West North Central	315	[2] 621	317	[2] 480	179	[2] 354	163	[7] 270	139	[7] 205
South Atlantic	58	160	58	131	42	152	56	66	42	[8] 64
East South Central	147	78	147	47	84	47	68	[9] 66	116	52
West South Central	44	86	35	69	53	30	44	60	9	34
Mountain	208	118	139	127	203	118	102	91	148	55
Pacific	155	237	110	216	102	159	[3] 67	151	50	121

SMALLPOX CASE RATES

	June 13, 1925	June 12 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926
103 cities	36	[2] 16	35	[2] 11	24	[2] 16	[3] 14	[4] 11	16	[5] 8
New England	0	0	0	0	0	0	0	0	2	0
Middle Atlantic	2	0	1	0	0	0	1	2	0	0
East North Central	40	12	42	10	19	14	13	10	11	[6] 9
West North Central	50	[2] 28	58	[2] 32	36	[2] 44	16	[7] 26	20	[7] 28
South Atlantic	21	38	29	30	13	26	10	11	23	[8] 9
East South Central	273	52	184	10	121	88	58	[9] 39	74	0
West South Central	4	34	18	26	0	17	4	22	4	4
Mountain	28	46	18	27	28	18	28	55	18	9
Pacific	141	54	146	24	163	32	[3] 85	19	97	24

[1] The figures given in this table are rates per 100,000 population, annual basis—and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Grand Forks, N. Dak., not included.
[3] Spokane, Wash., not included.
[4] Grand Forks, N. Dak., Sioux Falls, S. Dak., and Covington, Ky., not included.
[5] Detroit, Mich., Grand Forks, N. Dak., Sioux Falls, S. Dak., and Frederick, Md., not included.
[6] Detroit, Mich., not included.
[7] Grand Forks, N. Dak., and Sioux Falls, S. Dak., not included.
[8] Frederick, Md., not included.
[9] Covington, Ky., not included.

*Summary of weekly reports from cities, June 6 to July 10, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925—*Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926
103 cities	27	[2] 12	21	[2] 11	25	[2] 12	[3] 35	[4] 17	33	[5] 14
New England	24	17	19	19	17	9	22	12	21	9
Middle Atlantic	17	6	14	9	18	10	15	11	17	7
East North Central	9	4	6	4	8	4	10	5	13	[6] 4
West North Central	24	[2] 6	12	[2] 10	10	[2] 4	20	[7] 10	12	[7] 16
South Atlantic	61	26	46	28	67	30	65	36	56	[8] 43
East South Central	110	57	74	21	84	36	181	[9] 127	163	52
West South Central	110	52	123	30	128	30	233	13	159	30
Mountain	46	9	37	0	0	0	9	27	28	0
Pacific	14	13	6	8	19	16	[3] 21	22	17	13

INFLUENZA DEATH RATES

	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926
96 cities	7	10	6	7	6	5	4	[10] 6	2	[11] 4
New England	5	12	2	9	7	0	2	5	0	7
Middle Atlantic	6	9	4	9	6	6	2	7	2	1
East North Central	6	10	7	3	6	3	5	5	2	[6] 8
West North Central	8	4	6	4	4	6	0	[12] 8	0	[12] 0
South Atlantic	4	6	6	4	2	6	6	8	0	[8] 0
East South Central	16	36	32	16	16	5	11	[9] 0	16	16
West South Central	19	19	10	24	10	24	10	14	10	5
Mountain	9	9	0	0	9	0	0	9	0	0
Pacific	4	0	4	4	4	0	4	4	0	4

PNEUMONIA DEATH RATES

	June 13, 1925	June 12, 1926	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926
96 cities	99	95	78	87	65	74	56	[10] 75	59	[11] 67
New England	113	102	60	87	58	69	46	92	43	54
Middle Atlantic	130	109	93	95	75	83	61	90	64	73
East North Central	79	87	76	74	45	61	42	61	55	[6] 67
West North Central	57	58	32	75	51	44	40	[12] 38	38	[12] 53
South Atlantic	115	96	75	111	90	94	71	88	65	[8] 72
East South Central	58	125	95	90	110	125	89	[9] 121	84	119
West South Central	82	94	87	71	73	76	58	57	58	57
Mountain	102	82	139	100	55	109	65	46	74	36
Pacific	44	67	58	75	47	43	73	43	65	53

[2] Grand Forks, N. Dak., not included.
[3] Spokane, Wash., not included.
[4] Grand Forks, N. Dak., Sioux Falls, S. Dak., and Covington, Ky., not included.
[5] Detroit, Mich., Grand Forks, N. Dak., Sioux Falls, S. Dak., and Frederick, Md., not included.
[6] Detroit, Mich., not included.
[7] Grand Forks, N. Dak., and Sioux Falls, S. Dak., not included.
[8] Frederick, Md., not included.
[9] Covington, Ky., not included.
[10] Sioux Falls, S. Dak., and Covington, Ky., not included.
[11] Detroit, Mich., Sioux Falls, S. Dak., and Frederick, Md., not included.
[12] Sioux Falls, S. Dak., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	103	96	29,944,996	30,473,129	29,251,658	29,764,201
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	14	11	2,594,962	2,634,662	2,461,380	2,499,036
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended June 26, 1926—The following report for the week ended June 26, 1926, was transmitted by the Far Eastern Bureau of the Health Section of the League of Nations' Secretariat, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Small-pox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Iraq						
Basra	0	0	0	0	1	1
British India						
Calcutta	----	0	----	41	11	8
Bombay	----	0	----	0	13	13
Madras	----	0	----	0	1	0
Rangoon	----	6	----	12	2	2
Negapatam	----	0	----	23	0	0
Straits Settlements.						
Singapore	1	1	0	0	0	0
Dutch East Indies						
Surabaya	0	0	0	0	1	1
Siam						
Bangkok	1	1	56	26	3	2
French Indo-China						
Saigon and Cholon	3	1	15	11	2	0
Haiphong	0	0	42	42	0	0
China						
Amoy	9	----	0	0	0	0
Hongkong	0	0	0	0	3	1
Shanghai	0	0	1	0	----	1
Japan						
Osaka	0	0	0	0	2	0
Kwantung						
Port Arthur	0	0	0	0	1	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

British India—Chittagong, Cochin, Tuticorin, Vizagapatam.
Ceylon—Colombo
Federated Malay States.—Port Swettenham.
Straits Settlements—Penang
Dutch East Indies—Batavia, Samarang, Cheribon, Belawan Dli, Palembang, Sabang, Makassar, Menado, Banjermasin, Balik-Papan, Tarakan, Pontianak, Padang
Sarawak.—Kuching
British North Borneo—Sandakan.
Portuguese Timor.—Dilly.
Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.
French Indo-China.—Turane.
Formosa—Keelung.
Kwantung—Dairen.
Japan—Nagasaki, Yokohama, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki.
Korea.—Chemulpo, Fusan
Manchuria.—Antung, Mukden, Changchun, Harbin.
U. S. S. R.—Vladivostok.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.
New Guinea.—Port Moresby.
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia.—Noumea.
Fiji.—Suva.
Hawaii.—Honolulu.

AFRICA

Egypt.—Alexandria, Port Said, Suez.
Anglo-Egyptian Sudan.—Port Sudan.
Eritrea.—Massaua.
French Somaliland.—Jibuti.
British Somaliland.—Berbera.
Italian Somaliland.—Magadiscio.
Kenya.—Mombasa.
Zanzibar.—Zanzibar.
Tanganyika.—Dar-es-Salaam.
Seychelles.—Victoria.
Portuguese East Africa.—Mozambique, Beira, Lourenço Marques.
Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from:

British India.—Karachi.
Mauritius.—Port Louis.
Madagascar.—Tamatave, Majunga.

CANADA

Communicable diseases—Province of Ontario—May 30–June 26, 1926 (comparative).—During the four week period ended June 26, 1926, communicable diseases were reported in the Province of Ontario, Canada, as follows:

Disease	May 30–June 26, 1926		May 31–June 27, 1925	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis	5	1	5	2
Chancroid			1	
Chicken pox	454		457	1
Diphtheria	188	12	142	12
German measles	433		23	
Gonorrhea	65		132	
Influenza		20	10	7
Lethargic encephalitis			4	4

Disease	May 30–June 26, 1926		May 31–June 27, 1925	
	Cases	Deaths	Cases	Deaths
Measles	2,976	12	1,063	2
Mumps	37		300	
Pneumonia		159		126
Poliomyelitis	2			
Scarlet fever	373	3	326	1
Smallpox	36		12	1
Syphilis	72		48	
Tuberculosis	184	77	165	85
Typhoid fever	33		46	3
Whooping cough	290	6	297	7

Smallpox.—The greatest number of cases of smallpox was reported at Kingston, viz, 7. At North Bay and at Peterboro 6 cases each were reported; in Richmond township, 4 cases.

CHINA

Shanghai—Cholera—July 20, 1926.—Thirty-five cases of cholera with 8 deaths, were reported from Shanghai, China, July 20, 1926.

ECUADOR

Plague—Guayaquil—June 16–30, 1926—During 15 days ended June 30, 1926, one case of plague was reported at Guayaquil.

Plague-infected rats—During the period under report 10,037 rats were reported taken and 13 rats found plague infected.

GREECE

Plague—Patras—June 5–12, 1926.—Under date of June 12, 1926, two cases of plague were reported as having occurred at Patras, Greece, June 5 and 12, 1926, respectively. The occurrence was in different quarters of the city

IRELAND (IRISH FREE STATE)

Typhus fever—Kerry County—June 27–July 3, 1926—During the week ended July 3, 1926, a case of typhus fever was reported at Dingle, Kerry County, Irish Free State.

PANAMA CANAL

Communicable diseases—May, 1926—During the month of May, 1926, communicable diseases were reported in the Canal Zone, and at Colon and Panama as follows:

Disease	Canal Zone		Colon		Panama		Infected in other localities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chicken pox	1		1		3				5	
Diphtheria					8		1		9	
Dysentery		1	1		1	2	6	1	8	4
Hookworm			3		22	1	57		82	1
Malaria	17	1	1				29	1	47	2
Measles	2		1		4				7	
Meningitis					1	1			1	1
Mumps							3		3	
Pneumonia [1]		1		2		11		3	17	
Poliomyelitis	1	1							1	1
Tuberculosis [1]				6		14		3		23
Whooping cough					1				1	

[1] Only deaths reported.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended July 30, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China:				
Shanghai	Reported July 20	35	8	
India				May 23-29, 1926: Cases, 2,026; deaths, 1,202.
Bombay	May 30-June 5	1	1	
Calcutta	June 13-19	46	41	
Philippine Islands:				
Romblon Province	Dec. 11-31	42	43	
Siam:				
Bangkok	May 30-June 5	116	60	

PLAGUE

Place	Date	Cases	Deaths	Remarks
British East Africa:				
Kisumu	May 16-22	1	1	
Uganda	Mar. 1-31	35	31	
Ceylon:				
Colombo	May 29-June 5	1	1	
China:				
Foochow	June 6-12			Several cases, not epidemic.
Ecuador:				
Guayaquil	June 16-30	1		Rats taken: 10,037; found infected, 13.
Greece:				
Patras	June 5-12	2		In different quarters of city.
India				May 23-29, 1926: Cases, 6,094; deaths, 4,711
Bombay	May 30-June 5	4	4	
Karachi	June 13-19	1	1	
Madras Presidency	May 23-29	20	9	
Iraq:				
Baghdad	May 30-June 12	36	23	
Java:				
Batavia	May 29-June 4	10	10	Province.
Madagascar:				
Tananarive Province				Apr. 16-30, 1926: Cases, 30; deaths, 27.
Tananarive Town	Apr. 16-30	2	2	Bubonic: Cases, 28, deaths, 22. Pneumonic cases, 21, deaths, 21; septicemic, cases 16, deaths, 16
Other localities	Apr. 1-30	65	59	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	June 11-20	1		
Bolivia:				
La Paz	May 1-31	8	5	
Brazil:				
Rio de Janeiro	June 6-12		17	
British East Africa:				
Tanganyika	May 2-22		12	
Uganda	Mar. 1-31	1		
British South Africa:				
Northern Rhodesia	May 18-24	17	0	Natives.
Canada:				
Manitoba—				
Winnipeg	July 11-17	3		
China:				
Chungking	May 29-June 5			Present.
Hongkong	May 23-June 5	3	1	
Manchuria—				
Antung	June 13-19	1		On South Manchuria Railway.
Changchun	do	1		
Kai-yuan	do	2		Do.
Kungchuling	do	1		Do.
Penhsihu	do	2		Do.
Teshihchiao	do	1		Do.
India				May 23-29, 1926: Cases, 6,904; deaths, 1,865
Bombay	May 30-June 12	64	36	
Calcutta	June 13-19	8	7	
Madras	do		1	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended July 30, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Iraq				
Baghdad	May 30–June 5	1		
Basra	May 23–June 5	10	8	
Japan				
Taiwan Island	June 1–10	8		
Java				
Surabaya	May 16–22	14	1	
Mexico				
San Luis Potosi	July 4–10		1	
Siam				
Bangkok	May 30–June 5	4	5	
Union of South Africa				
Transvaal—				
Johannesburg	do	3		

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 11–20	1		
Egypt				
Port Said	June 4–10	1		
Ireland (Irish Free State)				
Kerry County—				
Dingle	June 27–July 3	1		
Palestine				
Jaffa district	June 15–28	5		

Reports received from June 26 to July 23, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18–May 1, 1926 Cases, 30; deaths, 24
French Settlements in India				Mar 7–Apr 10, 1926 Cases, 13; deaths, 13.
India				Apr 25–May 22, 1926· Cases, 10,542, deaths 6,440
Calcutta	Apr 4–May 29	478	418	
Madras	May 16–June 5	2	1	
Rangoon	May 9–June 5	23	16	
Indo-China.				
Saigon	May 2–15	52	48	
Do	May 22–June 5	22	21	
Philippine Islands				
Manila	May 18–24	2	2	
Provinces—				
Albay	Apr 18–24	1	1	
Mindoro	Feb 21–27	1	1	
Siam				
Bangkok	May 2–29	1,063	626	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Azores.				
St Michaels—				
Arrifes	May 9–15	1		
Livramento	May 15–29	2	1	
China				
Amoy	Apr 18–May 29		30	Quite prevalent
Do	May 30–June 12	19		Deaths not reported
Nanking	May 9–June 5			Prevalent.
Ecuador				
Guayaquil	May 16–June 15	5		Rats taken, 20,877; found infected, 18.

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 23, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Egypt				Jan 1-June 10, 1926 Cases, 56.
City—				
Suez	May 21-June 3	4	3	
Province—				
Beni-Suef	May 28-June 8	8	2	
Gharbieh	June 2	1	1	
Greece				
Athens	Apr 1-30	7	2	Including Piraeus
Do	May 1-31	9	2	Do
Patras	May 27	2	1	
Zante	May 17	1		
India				Apr 25-May 22, 1926 Cases, 38,880, deaths, 30,129
Bombay	May 2-22	9	9	
Karachi	May 23-June 12	10	9	
Madras Presidency	Apr 25-May 22	49	41	
Rangoon	May 9-June 5	7	5	
Indo-China				
Saigon	May 23-June 5	3	1	
Iraq				
Baghdad	Apr 18-May 15	107	61	
Japan				
Yokohama	Reported July 6		3	
Java				
Batavia	Apr 24-May 28	47	47	
Cheribon	Apr 11-24	3	3	
Madagascar				Apr 1-15, 1926 Cases, 42, deaths, 39
Moramanga Province	Apr 1-15	2	2	Septicemic
Tananarive Province—				
Tananarive Town	do	3	3	Pneumonic and septicemic
Other localities	do	37	34	Bubonic, pneumonic, septicemic.
Nigeria				Feb 1-Mar 31, 1926 Cases, 81, deaths, 62
Peru				May, 1926 Cases, 23, deaths, 10
Departments—				
Ancash	May 1-31			Present
Cajamarca	do			Do
Ica	do	1		
Libertad	do	4		Pacasmayo, cases, 2, Trujillo district, cases, 2
Lima	do	18	10	Lima City, 1 case, country estates, 1
Russia				Jan 19-Feb 25, 1926 Cases, [illegible]7.
Senegal				Nov 1-30, 1925 Cases, 3, deaths 2
Siam				
Bangkok	May 23-29	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Tunisia				
Kairouan	June 9	3		9 cases 30 miles south of Kairouan.
Union of South Africa				
Cape Province	May 16-22	5	3	
Orange Free State—				
Hoopstad District—				
Protestpan	May 9-22	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 10	10		
Brazil				
Manaos	Apr 1-30		5	
Para	May 16-June 19	20	21	
Rio de Janeiro	May 2-June 5	102	55	
Santos	Mar 1-7		1	
Canada				May 30-June 12, 1926 Cases, 46.
Alberta	May 30-June 12	3		
Manitoba	May 30-June 26	24		
Winnipeg	June 6-12	5	1	
Do	July 4-10	3		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 23, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Canada—Continued				
Ontario				May 30–June 26, 1926 Cases, 36
Kingston	May 23–June 26	5		
Kitchener	Apr 26–May 29	3	1	
North Bay	May 2–22	5		
Orillia	Apr 26–May 29	7		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
Saskatchewan				May 30–June 19, 1926 Cases, 16
Chile				
Antofagasta	June 6–12	1		
China				
Amoy	May 1–29		8	
Do	May 30–June 12	3		
Antung	May 16–June 13	4		
Chungking	May 2–June 12			Present
Foochow	May 9–29			Do
Hongkong	May 2–22	11	7	
Manchuria—				
An-Shan	May 16–June 12	5		South Manchuria Railway.
Changchun	May 16–June 5	5		Do
Dairen	Apr 26–May 9	31	6	Do
Fushun	do	3		Do
Harbin	May 14–June 12	16		
Kai-yuan	May 16–June 12	2		Do
Liao-yang	do	3		Do
Mukden	do	2		Do
Penhsihu	do	2		Do
Supingkai	do	1		Do
Tcshihchiao	do	1		Do
Wa-feng-tien	do	3		Do
Nanking	May 8–June 5			Present
Shanghai	May 2–29	9	24	Cases Foreign Deaths, population of international concession, foreign and native
Swatow	May 9–June 5			Sporadic
Wanshein	May 1			Present among troops
Chosen				
Fusan	May 1–31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15–June 10	12	2	
Esthonia				May 1–31, 1926 Cases, 1
France				Mar 1–31, 1926 Cases, 68.
St Etienne	June 9–15	2		
French Settlements in India	Mar 7–Apr 10	127	127	
Great Britain				
England—				
Bradford	May 23–29	1		
Newcastle-on-Tyne	June 6–12	1		
Nottingham	May 2–June 5	7		
Sheffield	June 13–19	1		
India				Apr 25–May 22, 1926 Cases, 27,983, deaths, 7,170
Bombay	May 2–29	114	63	
Calcutta	Apr 4–22	165	150	
Do	May 23–29	6	2	
Karachi	May 16–June 12	36	14	
Madras	do	6	3	
Rangoon	May 9–June 5	7	3	
Indo-China.				
Saigon	May 9–15	1		
Iraq				
Baghdad	May 9–29	3		
Basra	Apr 18–May 22	20	13	
Italy				Mar 28–Apr 17, 1926 Cases, 10
Jamaica				May 30–June 26, 1926 Cases, 99. (Reported as alastrim)
Japan				
Kobe	May 30–June 5	1		
Nagoya	May 16–22		1	
Taiwan Island	May 11–20	24		
Yokohama	May 2–8	2		
Java.				
Batavia	May 15–21	1		Province
East Java and Madoera	Apr 11–May 15	26	2	
Malang	Apr 4–10	6	1	Interior
Latvia				Apr. 1–30, 1926 Cases, 3

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 23, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Mexico				
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-July 5		1	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
San Antonio de Arenales	Jan 1-June 30			Present 100 miles from Chihuahua.
San Luis Potosi	June 13-26		7	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Nigeria				Feb 1-Mar 31, 1926 Cases, 270, deaths, 12
Poland				Mar 28-May, 1926 Cases, 12; deaths, 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Oporto	May 23-June 5	4		
Russia				Jan 1-31, 1926 Cases, 492.
Siam				
Bangkok	May 2-29	15	11	
Straits Settlements				
Singapore	Apr 25-May 1	1		
Tunisia				Apr 1-May 10, 1926 Cases, 6
Union of South Africa				
Cape Province—				
Idutywa District	May 23-29			Outbreaks.
Transvaal—				
Johannesburg	May 9-15	1		
On vessels				Three cases, 1 death, at Aden, Arabia, stated to have been imported by sea

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 10	5	1	
Chile				
Antofagasta	May 23-29	3		
Valparaiso	Apr 29-May 5		1	
China				
Ichang			1	Reported May 1, 1926 Occurring among troops.
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen	Feb. 1-28	228	18	
Chemulpo	May 1-31	28	1	
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30-June 5	1		
Cork	June 5	1		
Italy				Mar. 28-Apr. 17, 1926: Cases, 2.
Japan				Mar 28-Apr. 10, 1926: Cases, 15.
Lithuania				Mar. 1-31, 1926: Cases, 38; deaths, 5.
Mexico.				
Mexico City	May 16-June 5	20		Including municipalities in Federal District.
Do	June 13-19	9		Do
San Luis Potosi	June 13-26			Present, city and country.
Morocco				Mar. 1-31, 1926 Cases, 140
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces
Peru.				
Arequipa	Jan 1-31		2	
Poland				Mar 28-May 15, 1926 Cases, 781; deaths, 60
Rumania				Mar 1-31, 1926: Cases, 41.
Russia				Jan. 1-31, 1926 Cases, 2,956.
Tunisia				Apr. 1-May 10, 1926: Cases, 64.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 23, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				April, 1926: Cases, 85, deaths, 14 (colored). European, 2 cases. Total, 87 cases, 14 deaths
Cape Province				Apr 1-30, 1926: Cases, 71, deaths, 11. Native
Do	May 9-15			Outbreaks
Grahamstown	do	1		Sporadic
Natal				Apr 1-30, 1926: Cases, 4. Native
Orange Free State				Apr 1-30, 1926: Cases, 7. Native
Transvaal				Apr 1-30, 1926: Cases, 3, deaths, 3. Native
Yugoslavia:				
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-29	4	3	

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HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen B. J. LLOYD, *Chief of Division*

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PUBLIC HEALTH REPORTS

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FOOD POISONING FROM A STREPTOCOCCUS IN CHEESE

By B A LINDEN, W R TURNER, and CHARLES THOM, Microbiological Laboratory, Bureau of Chemistry, United States Department of Agriculture [1]

Two outbreaks of food poisoning attributed to cheese have been reported within the year March, 1925–Feburary, 1926. One outbreak involving nine persons at Biddeford, Me, was reported in March, 1925, as attributable to eating an imported Albanian cheese. The second outbreak of apparently 22 cases in Kansas City, Kans, was reported in February, 1926. The cheese suspected of causing the second outbreak was an American cheddar manufactured in Wisconsin.

The reports of the attending physicians in both cases were so similar and our bacteriological findings were such that they may be reported in one paper.

CASES

In the first outbreak, Dr. C. J. Xaphes, of Biddeford, Me., was called to attend nine persons suffering from what he diagnosed as food poisoning. The symptoms as given briefly by him are as follows. "Pains in stomach, severe vomiting, diarrhea, expression dull, and pulse fast." His investigation of the food eaten by those affected showed that cheese was a principal component of the single meal which all had taken together. None of the actual food consumed was available; but, since suspicion was placed on the cheese, samples from the same lot were obtained and forwarded to the Microbiological Laboratory of the Bureau of Chemistry.

The cases in the second outbreak reported in February, 1926, were very similar. Dr. H. L. Dwyer, of Kansas City, in reporting the 18 cases which he treated, gave the following descriptions "The symptoms manifested were referable to the stomach and intestines, and were characterized by nausea and vomiting, paroxysms of abdominal pain, and diarrhea The nature of the symptoms and the sudden attack in so many individuals suggested a common cause, probably related to some dietary factor Investigation along this line revealed the fact that all the affected persons partook of some

[1] The authors acknowledge the cooperation of the Hygienic Laboratory of the United States Public Health Service, which furnished animals and space for an essential check series of feeding experiments

cheese and this was the only food substance which was eaten by everyone of those affected." A sample of the cheese actually used was obtained and forwarded to the Microbiological Laboratory.

Physical examination of the samples of cheese submitted from the first outbreak showed it to be extremely hard, with an apparently high salt content, which was evident by the appearance of salt crystals on cut surfaces of the samples. The percentages of moisture and salt found by the Food Control Laboratory in these samples, together with the aerobic counts per gram made from plate cultures on dextrose agar are given in Table 1.

TABLE 1

Sample	Per cent of moisture	Per cent of salt	Bacterial counts	Sample	Per cent of moisture	Per cent of salt	Bacterial counts
A	25 09	5 50	2,000,000	D	24 90	7 20	500,000
B	25 16	5 84	600,000	E			200,000
C	24 39	7 37	300,000				

From suitable colonies transfers were made to dextrose agar slants and smears prepared for miscroscopic examination From approximately 100 colonies thus examined cocci were the only group found, and of these but five proved to be members of the *Streptococcus lactis* type. Members of the paratyphoid-enteritidis group, so commonly reported to be the cause of such outbreaks,[2] were not found.

The presence of such large numbers of cocci in a type of cheese with a long ripening period and a high concentration of sodium chloride in the water present seemed significant. This organism was, therefore, isolated and used for feeding experiments. When fed to white rats, rabbits, guinea pigs, and sheep, no apparent harmful effects were noted. More or less disturbance was produced when milk cultures were fed to dogs. Cats when fed milk cultures gave positive results. For these experiments, flasks containing 100 c. c. of sterile milk were inoculated and incubated at 37° C. for three days. Upon feeding this culture to a cat, diarrhea was produced within four hours. This abnormal condition continued for four days. The original organism was recovered from the stools of this animal for three days following the first disturbance. Cultures of the organism recovered, when grown in milk and fed to a second cat, produced the same gastric disturbances in 8 to 10 hours. A third cat fed the original isolated cultures gave the same positive results.

On account of the seemingly high acid production in milk cultures, it was deemed advisable to observe animals fed "soured" milk.

[2] Numerous epidemiological and bacteriological discussions of such outbreaks are scattered through the literature of the past five years.

Flasks of milk "soured" with a culture of *Streptococcus lactis* were used. Three feedings of this material failed to produce any abnormalities in the experimental animals.

Experimental work was interrupted from June, 1925, until the occurrence of the second outbreak in February, 1926 The cultures used in the work already reported were found to be dead, but the organism was again isolated from the original cheese, which had remained in the refrigerator. Although the cheese was heavily incrusted with salt, the organisms remained viable and did not appear to have lost virulence by the storage.

The sample submitted from the second outbreak was taken directly from the cheese held responsible for the poisoning. Aerobic plates on dextrose agar made from this sample showed 27,000,000 bacteria per gram of cheese Of these, approximately 20,000,000 were cocci which were morphologically and culturally identical with those isolated from the Albanian cheese. A number of examinations failed to reveal the presence of members of the paratyphoid-enteritidis group of organisms. Accordingly the organism from the Albanian cheese was reisolated, as already indicated, and the two strains were carried parallel in further experimental work.

Results of the experiments conducted the previous year had indicated that cats were more susceptible than any other type of animal tested. A number of cats were placed under observation for several days to determine the normal consistency of the stools when the animals were fed a normal diet of meat, bread, and milk. After the preliminary observation period, a single feeding of inoculated milk was introduced, followed by return to the regular diet. Previous experiments had shown that the introduction of such a feeding of fresh or sour milk had no disturbing effect upon the cats.

For these experiments flasks containing 150 c. c. of sterile skim milk were inoculated with the cheese organism. Incubation at 37° C. for 48 hours caused the milk to curdle, and after this time feedings were conducted. Table 2 shows the results of nine feeding experiments Cultures A_1 indicate the strain isolated from the Albanian cheese, D_1 the Wisconsin cheese. Culture C_2S_2 fed to cat No. 7 was a culture recovered from the stool of cat No. 1 and grown in milk.

TABLE 2

Animal No	Culture	Diarrheic stools within—	Normal stools after—	Animal No	Culture	Diarrheic stools within—	Normal stools after—
			Days				*Days*
1	A_1	3 stools within 16 hours	5	6	A_1	24 hours	6
2	A_1	Animal failed to eat culture		7	C_2S_2	5 hours	4
3	A_1	24 hours	6	8	D_1	24 hours	5
4	D_1	48 hours	6	9	D_1	do	6
5	D_1	do	6				

From Table 2 it is seen that this organism when grown in milk and fed to cats causes a gastro-intestinal disturbance. The feces from these animals were exceedingly watery and of a light color as contrasted with the normal hard, dark-colored excreta. It is interesting to note that the culture (C_2S_2) recovered from the feces of a previous feeding caused the gastro-intestinal disturbance in a much shorter time than any of the other cultures. Recovery from the effects of the feedings required about six days in the majority of cases.

While cultural studies were being made, it was observed that chopped-beef medium acted as an excellent substratum for the growth of the organism. To test beef as a basis for poisoning outbreaks of this kind, jars containing 100 grams of chopped meat and 3 ounces of broth were inoculated and incubated for 24 hours at 37° C. By the end of this incubation period luxurious growth had been produced. Three cats were fed with such cultures, including both strains, but no positive gastro-intestinal disturbance occurred. The experiment was repeated with three more cats, but again there was no evidence of enteric disturbances.

Similar flasks were prepared and inoculated with retransfer after each three days of incubation until the sixth transfer. These cultures were fed to two cats, but no disturbance was produced. Organisms from these meat cultures, including strains A_1 and C_2S_2, were then transferred back to milk and retransferred at three-day intervals six times and the sixth series of milk cultures were fed to three cats. Diarrhea developed in all three animals in approximately eight hours.

Thus far, therefore, no sickness has been produced in these experiments except when milk was used as a culture medium.

Cultures of the organisms isolated from the two types of cheese were studied and the following description is prepared from the results obtained. These studies were identical for the organisms from the two sources; therefore but one description is necessary.

DESCRIPTION OF THE ORGANISM

MORPHOLOGY

Form: The organism was spherical, regardless of the type of media used for its growth.

Size: The cells had a diameter of from 0.8 to 1.2 micron.

Arrangement: The organisms were generally arranged in pairs or short chains. In milk cultures, pairs were the usual type. In beef infusion medium cultures, short chains of 6 to 8 cells predominated.

Motility: Motility was never observed.

Staining reaction: The organism was found to be Gram positive, regardless of the age of the culture.

CULTURAL CHARACTERISTICS

Agar streak: On dextrose agar, growth was rapid, beaded, raised, smooth, glistening, grayish, white opaque. Growth on beef extract agar was somewhat less rapid than on dextrose agar.

Agar colonies: On dextrose agar, plates showed growth within 24 hours at 37° C. The colonies formed were small, round, grayish white, amorphous, undulate-edged, slightly raised on the surface of the medium, and small, grayish white, lens-shaped subsurface.

Gelatin stab: Growth was uniform throughout the length of the stab without any liquefaction.

Bouillon: A uniform turbidity with no sediment was produced.

Potato: Potato cultures showed no evidence of growth

Dunham's solution: A flocculent growth was produced, with no formation of indol

Nitrate broth: Uniform cloudiness was produced, with no reduction to nitrates.

Litmus milk: Reduction of the litmus was evident after 24 hours' incubation at 37° C. After 48 hours, evidence of acid production was shown by the production of a reddish ring at the surface. Soft coagulation was produced after three to four days.

BIOCHEMICAL FEATURES

Gas production: Gas production was not evident in bouillons containing various fermentable substances.

Acid production: Acid production in milk after a long incubation showed the production of 0.5 to 0.6 per cent acid, calculated as lactic. Bouillon containing dextrose, maltose, lactose, sucrose, salicin, mannite, rhammose, and glycerol showed acid production, but with raffinose and inulin no acid was produced.

Oxygen relation: The organism was facultative.

Temperature relation: Minimum for growth, 16° C.; optimum, 37° C.; maximum, 42° C

The occurrence of these organisms in cheese, together with their reaction in experimental animals fed milk cultures, makes significant their relation to the common pasteurization temperatures. Consequently, experiments were conducted using the temperatures of 138°, 142°, and 145° F. Tubes containing 9 c c. of sterile skim milk were allowed to heat to the desired temperature in the constant temperature bath and were then inoculated with 1 c. c. of a bacterial suspension. At intervals of five minutes the tubes were removed, cooled in ice water, and 1 c. c. quantities plated. Total counts were made after 24 hours' incubation at 37° C. At 138° F. no apparent effect was produced. Table 3 shows the results of these experiments.

TABLE 3

Temperature	142° F	145° F	Initial count	3,500,000	1,000,000
Time exposed	Summary of surviving bacteria		Time exposed	Summary of surviving bacteria	
5 minutes	2,570,000	223,850	20 minutes	400,000	50
10 minutes	760,000	7,000	25 minutes	160,000	0
15 minutes	550,000	500	30 minutes	6,800	0

From Table 3 it is seen that 142° F. has some effect upon the organisms. However, for complete sterilization, 145° for 30 minutes is considered necessary.

The organism involved has not been identified certainly as any well-described species. Morphologically it has much in common with the ordinary lactic types used in the preparation of "starters" for butter and cheese making, although the concentration of acid produced (0.5 to 0.6 per cent by titration, calculated as lactic) is considerably lower than that sought in the usual lactic "starters." The organism could be carried as a contamination of such starters without easy means of detecting its dangerous character. Its ability to grow readily in many substrata leaves many avenues open by which this species may reach human food.

These outbreaks and the confirmatory experiments described are reported here without attempting to generalize too broadly. Barber [2] reported similar experiments with cocci and similar results upon human subjects. The recent literature of food poisoning and food infections has failed to recognize organisms other than those of the paratyphoid-enteritidis group as involved in causing these acute enteric disturbances. Nevertheless, such outbreaks are exceedingly frequent and such studies as have been possible have very commonly yielded negative results. It may well be that the description of the organism found in these samples, together with the cultural methods described, may lead to the recognition of other outbreaks from this type of organism.

REPORT OF A SURVEY TO DETERMINE THE MALARIA PREVALENCE IN THE OKEFENOKEE SWAMP

By BRUCE MAYNE, Associate Entomologist, United States Public Health Service

The Okefenokee Swamp is situated in Charlton and Ware Counties, in southeast Georgia, and extends into northeast Florida, covering about 660 square miles. The general level of the swamp is from 114 to 120 feet above tidewater. At ordinary stages of water it discharges into the Gulf of Mexico near Cedar Keys through the Suwanee River

[2] Barber, M. A.: Milk Poisoning Due to a Type of *Staphylococcus albus* Occurring in the Udder of a Healthy Cow. Philippine Jour. Sci., 9: 515, 1914.

but in wet weather overflow water reaches the Atlantic through the St. Mary's River.

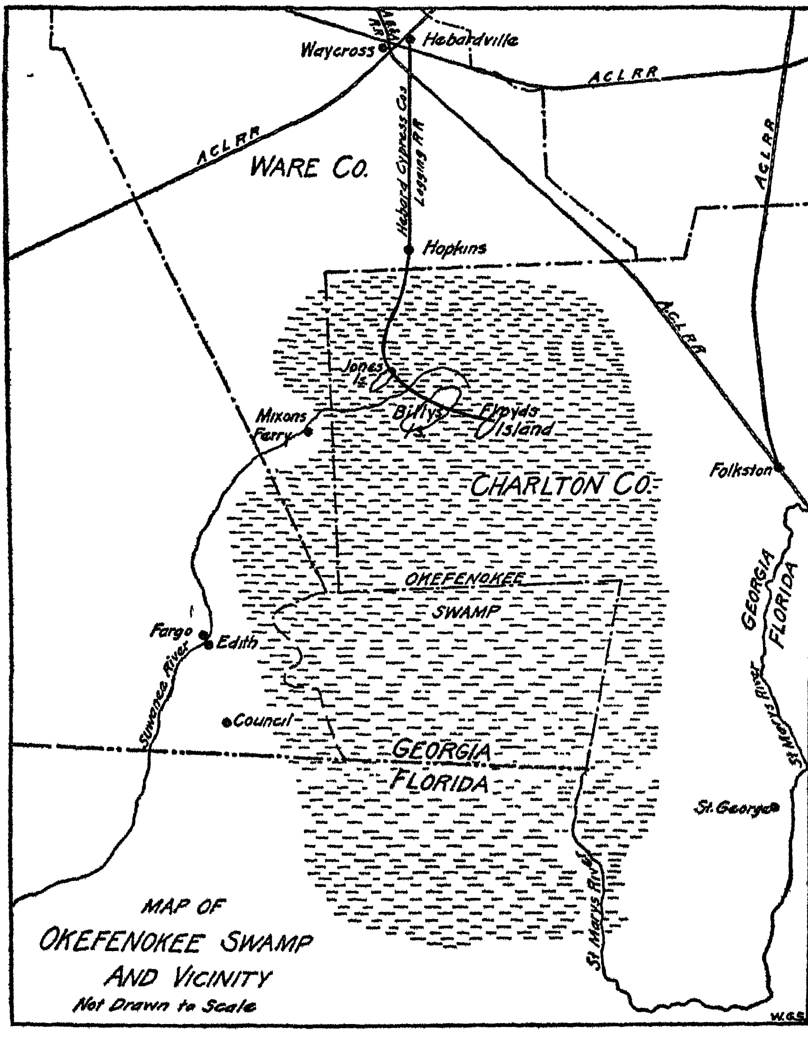
Where the sand rises a little above the water there are islands covered with open forests. The largest islands in the swamp, Floyds, Billys, Jones, and Black Jack are covered with pine, palmetto, and cypress on their higher portions. On the borders of these islands there is a low hummock land which sustains a vigorous growth of such timber as magnolia and oak in rich, sandy soil. Outside of these growths of timber are dense thickets of small shrubs and matted bamboo briers and beyond is an open marsh covered with water lilies and long bushes, the thick roots of which afford the only support for the feet in wading through the soft ooze and mud, which yields to the weight of a man so that he may sink to his armpits in many places. Forests of cypress, black gum, and other moisture-loving trees grow in the muck of the swamp; and where the muck is several feet deep trees are absent or nearly so, making open marshes known locally as "prairies" The prairies, some of which have an area of several square miles, are mostly in the eastern part of the swamp Many small islands and clumps of trees, "houses," dot these prairies, and they are generally surrounded by a floor of moss (*Sphagnum* moss) forming a floating surface over the water. Often the surface moss does not break through beneath the feet of the walker, and he can then see it sink and rise for several yards at every step, hence its Indian name, Oke-fe-no-kee, or trembling earth

The first recorded survey of the swamp was made in 1857, with a view to ascertaining the practicability of draining it. An extensive drainage canal, abandoned by the builders, still remains to bear witness to these futile attempts During the past 40 years numerous explorations of the great swamp have been made, chiefly by hunting parties, timber surveyors, and naturalists.

On August 22, 1924, a survey of the Okefenokee Swamp was instituted by the United States Public Health Service to determine the prevalence of malarial fevers and mosquitoes, with a laboratory and office installed at Billys Island, the field headquarters of the Hebard Cypress Co. This company leased the swamp lands for the timber rights and colonized the habitable portions with a view to permanent occupation. Billys Island is 5 miles long and 1 mile wide. The principal settlement was situated about 15 miles in the interior of the swamp. It housed about 450 people and accommodated the following domestic animals: 105 cattle, 3 mules, 162 swine, and approximately 1,000 fowls. An impression of the permanence of the settlement may be gained by a list of buildings that were maintained in addition to the usual company railroad workshops and structures incidental thereto. Office, general store, confectionery store, drug store, negro schoolhouse and church, white schoolhouse and church,

motion-picture theater, four bathhouses, two boarding houses, and a hotel. This survey was continued the following year, in August, 1925, making a total of 70 days devoted to the complete investigation.

Factors considered in the survey.—The surrounding waters at Billys Lake and the edge of the swamp were surveyed for aquatic forms in



order to locate the source of *Anopheles* propagation. The usual inspection of houses and animal quarters and outhouses was undertaken, and observations were made of mosquitoes biting in the open. Mosquitoes collected inside dwellings were dissected when the residents gave a history of even remote or doubtful malaria. Blood

specimens were collected from similar sources, and in a few instances spleen palpations were made in addition. A malaria history index was made, and the economic conditions of the residents were studied intensively.

The prevalence of anophelines and their habits —The following facts have been noted: The only anopheline present was *A. crucians*, which was found inside of dwellings as well as on porches and under houses. *A. crucians* was commonly attracted by artificial light, and found to attack usually in the presence of bright electric lights. This species was seen biting in daylight, in sunshine as well as shade, near lake or swamp water, beginning as early as 7.15 a. m. In one experiment *A. crucians* was found abundantly in a poorly screened shack, biting at night and escaping before daylight. It was conclusively demonstrated during both visits to the swamp that this species freely entered houses, only a small proportion remaining until daylight after a nocturnal invasion. A specific instance of this is related as follows

While attending a social party at a private home on Billys Island I observed specimens of *A. crucians* attacking persons seated inside the house. I counted 18 persons who were being annoyed by the biting of mosquitoes, and during the course of 40 minutes I collected and identified 212 specimens of *Anopheles crucians*. On the following morning, at 6 30 a. m., an inspection of this residence showed only 14 specimens of *crucians* inside the dwelling and 142 specimens on the gallery resting on rafters and walls.

Anopheles crucians was found on Billys Island, Jones Island, and Floyds Island in great numbers. On Billys Island it far outnumbered all other species of mosquitoes. An idea of its prevalence and distribution is given in the following typical figures from the catch of two localities:

Where taken	Residence of Mr A	Residence of Mr B
Inside of house	92	12
Veranda and under house	139	1,502
Privy	36	6
Smokehouse and c[illegible]house	20	40
Cow stable	346	197

In the wooded area invasion of tree stumps and hollow logs by *A. crucians* is very common. Over 200 specimens, all *A. crucians*, were collected from one hollow log near Billys Lake. Here also in the course of 20 minutes 35 specimens of *A. crucians* were collected in the act of biting the investigator.

Relation of temperature to biting.—Here, as elsewhere, a definite relation was noted as to the effect of temperature on mosquito

biting habits. In this regard the relations of humidity as influenced by swamp environments were observed to have no marked effect. The following data are presented:

Observation No 1, August 22, 1925—8 p m outdoor temperature, 72.5° F. on veranda of house Here for period of one hour no biting was experienced. A change was made to the room with windows closed, where the temperature registered 78° F In the course of one hour eight specimens of *crucians* were collected in the act of biting a companion and myself

Observation No 2, August 15, 1925—Every evening up to this time note was taken of the number of *crucians* attacking persons in and about houses on the island The temperature had been registering a mean maximum of 82° F., and infestation with *crucians* was constant and noticeable Beginning August 16 to 18 there was a temperature drop to 73° F from 7 p m to 12.15 a m, during which time there was an entire absence of biting from *A crucians*. Five persons in various homes in the swamp reported the marked difference, and confirmed the impressions of the writer as to the correlation of decline in temperature and change in biting habits of the *crucians*. Beginning with the evening of August 18, normal warm temperature prevailed and the mosquito attacks were resumed as formerly.

Numerous isolated observations were made during the two summers' investigations tending to confirm the conclusion that, under conditions found present in the swamp, biting by *A. crucians* never occurred with temperatures under 72° F.

History of the reported absence of malaria in the Okefenokee Swamp.—This particular region was selected for investigation because of the repeated claims of visitors to the swamp of the perpetual freedom from malaria. Doctor Reavis, the physician of the Hebard Cypress Co., had practiced medicine continually in the Okefenokee Swamp and vicinity for 6 years, and was familiar with the case records of his predecessors for an additional 10 years. He asserted quite positively that malarial fevers in this region were unknown in acute and chronic forms.

Settlers born in the swamp or intimately acquainted with conditions there for periods of 25 to 40 years declare that chills and fever were never present to their knowledge. Many of these men served as guides and hunters for various scientists who in the past 20 years have visited the region for purposes of collecting specimens and for biological study.

Several leaders of camping parties furnished the information that no case of malarial fever resulted from exposure to bites of harassing swarms of anopheline mosquitoes during several years of occasional visits. Trappers and woodsmen in this region were not acquainted with any case of suspicious symptoms of malaria originating in the swamp. Mr. Hopkins, former field manager of the Hebard Cypress Co., reported having spent three years with 12 to 15 men in a survey party visiting all sections of the swamp without a single instance of complaint of malarial symptoms.

Doctor Armistead, the physician at the town of Hopkins, the first settlement north of the swamp, who is the company doctor for the Twin Tree Lumber Co., reported that the cases of malarial fever observed in that town were contracted in the towns of Council and Leesburg, Ga. He had never seen a case of chills and fever on Jones Island, the property in the swamp operated by the Twin Tree Lumber Co., among a working force of 320 to 375 men

Malaria history index.—On account of the reputed absence of the disease, it was deemed necessary to proceed circumspectly in the manner of obtaining individual histories from residents of the swamp. With this in view a history index was obtained with the following results:

Year	Number of persons	Report
1924	435	Negative
1925	558	Do

Blood specimens obtained.—As many blood specimens as possible (347) were collected in the course of the investigation. These were taken at the company physician's office, in the company commissary store, and at private homes. "Thick smears" were made, and whenever there was any complaint of fever or previous history of suspicious malarial symptoms a thin smear was obtained in addition to the thick-smear blood specimen.

Results of study of histories and blood examinations.—During the two seasons of the investigation no plasmodia were found in an intensive study of the 347 blood films examined. About 34 persons gave a history of having had malaria within the preceding four years, and in every instance they claimed to be free from symptoms at the time of this investigation. Examination of the blood of these persons did not reveal malaria parasites. None of these persons was taking treatment for malaria at the time of the investigation

A few specific instances of histories of such people are cited:

One household of seven persons, who formerly resided at Owens Ferry on the Saltillo River, in Georgia, asserted that they had been malaria sufferers for years, that they had never missed two months without clinical symptoms They had lived in the Okefenokee Swamp 18 months and had never experienced chills or other evidence of their former complaint. I examined all seven of these persons, and all appeared negative for malaria.

In 1919, 6 years previous to this investigation, a party of eight people had entered the employ of the Hebard Cypress Co , after a six weeks' stay at Council, Ga , where they suffered severely with malarial fevers. None of these people complained of a recurrence of symptoms up to the time I made blood examinations and found them negative microscopically.

One year prior to this investigation two families of nine persons had entered Billys Island after spending 10 months with frequent spells of chills and fever in a malarious section of northwest Florida Not one of these people showed enlarged spleens or plasmodia on examination during the present investigation.

Observations on mosquito incidence.—It seemed rather anomalous that in the presence of innumerable adult *Anopheles* so few larvae were observed. Numerous excursions were made in small boats, covering approximately 30 miles of navigable water throughout the swamp territory, when only a few aquatic forms of *Anopheles* were encountered The larvae collected were few in number, never more than three-fourths grown They were found in open swamp less than 1 mile south of Billys Island; on the shore line in protected coves of Billys Island, along the grass-lined banks of the headwaters of the Suwanee River, and in flotage in Big Water Lake 14 miles east of Billys Island

Top-feeding minnows, *Gambusia* and *Fundulus*, were present in abundance The wooded swamp sections and portions of Billys Lake and "The Canal" were matted with *Sphagnum* moss The open waters, "the prairies," were canopied with a species of water lily, or "bonnets" In these environments mosquito larvae or pupae were never found

Adult mosquitoes were collected from various natural habitats and in the region of settlements during these studies as follows:

Year	Total	Female	Male	Species
1924	4,282	4,249	33	*A crucians*
1925	6,528	6,476	52	Do

A total collection of 10,810 specimens were examined with a hand lens, and in every instance no other species but *A. crucians* was identified. No specimen of *quadrimaculatus* was encountered in the swamp area. These mosquitoes, exclusive of the 85 males, were found distributed in the following resting places:

Location	Number of specimens	Percentage
Inside of dwellings	1,180	11
Porch and under dwellings	1,609	15
Privy	965	9
Outhouses	613	6
Mule and cow stable	5,577	52
Fowl house	751	7

House infestation by *A. crucians* in occupied dwellings was common. As many as 520 specimens were collected from the interior and gallery of one four-room house.

There seems to be a correlation between the small number of males found and the scarcity of larvae. There were only 85 males in a total of 10,810 specimens collected, giving a proportion of 1 male to 127 females *A. crucians*. This suggests, in addition to the absence of larvae or lack of propagation, the probability of the production of definite broods with little or no overlapping in generations, a condition not found commonly elsewhere.

Inasmuch as it appeared to be an established fact that *Anopheles quadrimaculatus* was never found in the swamp, the query arose as to the possibility of this species becoming established when introduced from the outside. Only one experiment was attempted bearing on this subject. A specimen of *quadrimaculatus* captured at the town of Hopkins was brought to the swamp laboratory. It was induced to bite the observer and placed in a suitable jar for development. Two days later the specimen was killed after having laid about 20 eggs in water obtained from the swamp, and 18 larvae were produced. These were allowed to develop for six days and then destroyed.

SUMMARY

No malarial fevers were found in the area known as the Okefenokee Swamp on the border between Florida and Georgia.

In the limited time of the investigation a history index was made of 993 persons. Blood examinations were made of 347, in whom no plasmodia were found. *Anopheles crucians* was the only species of mosquito found in a collection of 10,810 specimens. Of these, 307 specimens were dissected with negative results.

SURVEY OF THE SETTLED AREA SURROUNDING THE SWAMP

Several settlements and towns bordering on the swamp were visited and inquiries were made relative to malaria incidence. Investigations were made of the following.

Hopkins, situated 15 miles north of Billys Island, with a population under 1,000. This town was the mill center of the Twin Tree Lumber Co., and the railroad junction for the Hebard Cypress Co. Here in 1924 malaria was found sporadically, in every instance introduced. Several cases were traced to Leesburg, Ga , and Council, Ga. In 1925 there were no cases observed Collections of *Anopheles* were made here in both years, when great numbers of mosquitoes were found. *Anopheles crucians* predominated at all times. A few specimens of *A. quadrimaculatus*, in the ratio of 1 to 160 *crucians*, were collected in both years of the investigation.

Suwanee Lake Ranch, 2 miles west of Hopkins, housing 16 persons. Numerous *Anopheles crucians* were observed and collected, and malaria histories taken. No evidence of malaria was noted.

Mixon's Ferry, on the headwaters of the Suwanee River, 10 miles west of Billys Island Here 18 people lived in a secluded community engaged in agriculture and fishing Two days were spent here and information was obtained ruling out malaria either recent or remote. Anopheline mosquitoes were found to be extremely numerous. I collected 312 specimens of *A crucians*

On the eastern border of the swamp the region was surveyed as far south as Folkston and St George, about 35 miles from Waycross. This locality is 6 miles from the border of the swamp, and has a population of about 2,800 people. The records of the local physician practicing here for five years indicated the entire absence of malarial fevers on the southern edge of the swamp. This was also confirmed in a malaria history survey. The only anopheline mosquito observed here was *crucians*, in moderate numbers. About 600 specimens of *crucians* were collected from this locality.

Edith, a settlement of about 100 people, 30 miles southwest of Billys Island and on the east bank of the Suwanee River, about [illegible] miles from the swamp. Malaria was not present at the time of my visit, and records of 25 years signified the absence of malarial fevers In a collection of *Anopheles* from this place two *quadrimaculatus* and 258 *crucians* were observed.

Fargo, situated directly across the river from Edith, with a population of 400. No histories of malaria were obtained here. There were collected 357 *crucians* and 3 *quadrimaculatus*.

Council, Ga., a lumber-mill town of 800 people, situated 38 miles from Billys Island Here malarial fevers were reported as very serious. The company physician had treated 78 cases of bedridden malaria patients within eight months At the time of my visit there were 18 cases under treatment. A collection of 112 specimens yielded 16 *A. quadrimaculatus*.

CHOLERA IN BANGKOK AND THE WORK OF THE SIAMESE RED CROSS

According to the latest reports, the cholera epidemic continues in Bangkok, Siam. From May 2 to 22, 1926, there were reported 944 cases of cholera with 508 deaths in Bangkok, 362 cases with 192 deaths being reported for the week ended May 22.

Information has been received from official sources that, in view of the continuation of the epidemic, attacks have been made on the Red Cross Society of Siam by two Siamese newspapers, which have stated that the society has not given sufficient aid in combating the outbreak and is not cooperating with the public health department or does very little in comparison with the activities of that department.

In a recent communication the American minister at Bangkok gives the information that, in view of such charges, the Siam Red Cross Society has issued a statement signed by H. R. H. Prince Nagor Svarga, vice president of the society, who states that the articles appearing in the two newspapers were marked by ignorance of the facts and were not meant to convey friendly advice; that the council of the Red Cross Society does not care to dispute with any newspaper or newspaper writer, but, as such articles might mislead the people and lessen their trust in the Red Cross, it has been thought well to make the following reply:

1. As to the aims of the Red Cross, the society was not established to do work which would in any way compete with the work of Government officials. The Red Cross is designed to be a support to the Government Some of its work it does hand in hand in agreement with the Government; some of its work it does of its own initiative; but there is no competition.

2. Fighting an epidemic of disease is quite special work, and if that work is undertaken in different ways and not under the direction of one head, good results are impossible; in fact, serious harm might be caused For that reason, in relief work in time of any public calamity, or in fighting an epidemic of disease, when Government officials have entered on the work, Red Cross societies all over the world must place themselves under the directions of the Government officials and act under their orders. In this particular case the department of public health represents the Government for the purpose of this work The Red Cross Society, therefore, does its work, in this connection, along the lines prescribed by and under the direction of the department of public health. No independent action is taken.

3. From the beginning of this cholera epidemic many months ago, the Red Cross Society has been in close touch with and has acted according to the requirements of the department of public health. For example, the society began making anticholera vaccine without bringing up any question of cost. Then, when the epidemic became worse at the beginning of the present year, the Red Cross Society had two meetings with the officials of the public health department. The duties of the bodies were then divided most amicably so as to cover the whole field

4. The department of public health at the same time expressed a wish that the supply of vaccine should be increased to 25,000 cubic centimeters a day. That was ten times the former quantity, but the Red Cross supplied the new requirements, though it meant working by night as well as by day. This vaccine has to be prepared with the utmost care; any mistake might be dangerous to the people. Throughout, the department of public health has found the supply sufficient and correctly prepared.

5. For the vaccine supplied to the department of public health since the beginning of the year and to be supplied until the epidemic subsides, the Red Cross has agreed to charge the department nothing. It is part of the contribution of the Red Cross toward fighting the epidemic, and it is costing something like 100,000 ticals a month.

6 The Red Cross makes provision for inoculating all persons coming to its various institutions and sends doctors to people's houses for the same purpose This is done without any charge being made

7. When the amount of vaccine produced had suddenly to be increased tenfold, the supply available for doctors and dispensaries was stopped for a few days; but that supply is again available as before. It was felt that it was more important to maintain the supply by which everybody could be inoculated free of charge than to sell to private practitioners.

TYPHOID OUTBREAK AND ANTITYPHOID CAMPAIGN IN COLON, PROVINCE OF MATANZAS, CUBA[1]

Early in December, 1925, there occurred a case of sickness in Colon which was diagnosed as malaria by the local health officer. Under this supposition the patient was permitted to be moved to a different part of the town. Like many other homes in Colon, this new home was provided with a pit latrine which was connected with an unused well. The city obtains its water supply from a great number of wells, all fed by the same underground stream as are the unused wells employed for the deposit of excreta.

Within 10 or 12 days of the patient's arrival, 20 new cases of typhoid fever occurred in the immediate vicinity of his house, all verified first clinically and later bacteriologically as positive for typhoid fever—evidently a clear-cut case of water-borne infection

Unfortunately, this outbreak was not reported to the Federal health authorities. It appears that the infection was next carried to a private waterworks system, about 20 yards away, and by the 16th of January, 1926, a large number of persons using this system (the wealthier class) had contracted the disease Colon had from 150 to 200 cases of typhoid fever, and it was then that official reports began to be made of a few cases.

Suspecting the gravity of the situation, Doctor Rensoli, secretary of the department of health, sent experts to the scene and on receiving their telegraphic reports went to Colon himself, where he ordered the following measures to be taken: Chlorination of all water supplies; establishment of inoculation stations; painting and cleaning of meat shops and placing grates in their refrigerators; control of the

[1] Reported to the Academia de Ciencias Médicas, Físicas y Naturales de la Habana, by Dr José J. Chalons.

supply of milk, vegetables, etc , campaign against flies, and isolation of cases to avoid infection by direct contact.

The campaign against the epidemic was then actively undertaken by Doctor Chalons His first step on arrival in Colon was to hospitalize 60 or 70 cases existing among the destitute class of the city. The ice being found to be contaminated, the ice factory was ordered closed Similar measures were to have been taken with the soda-water plant, but its proprietor closed his place of business voluntarily.

The streets, theaters, and parks of Colon were deserted and commerce was at a standstill when the major operations of the campaign were undertaken

Chlorination of water —All water was treated with hypochlorite, and by the end of the incubation period an immediate effect was seen on the new-case incidence It is believed that this one measure reduced the force of the epidemic by at least 70 per cent

Contamination of water reduced —Pit latrines were immediately disconnected from the wells; the former were cleaned out and the latter thoroughly disinfected, the owners being warned that any further installation of a similar nature would render them liable to a fine of $500 in addition to criminal action.

Inoculation stations.—Four stations were established at convenient points, it being necessary to increase this number to five when the isolation of the town was completed.

Sanitary cordon.—With the aid of troops and police, a complete sanitary cordon was instituted, which prevented egress from the town to anyone not provided with an inoculation certificate and with a health certificate issued on the day of departure After the establishment of the cordon, no new cases were reported outside the town.

During the first few days on which the inoculation stations were in operation, only the persons conscious of the existing peril had recourse to them, at the rate of about 300 or 400 daily When this attendance decreased, inoculation was made compulsory, this measure bringing in about 1,700 persons the first day, about 1,300 the second and between 700 and 900 during the succeeding days, the number later falling off again. Knowing from the census that many of the inhabitants still remained unprotected, posters and circulars were distributed throughout the town by soldiers and police, announcing that all persons found uninoculated at the end of four days would be arrested and fined. This action induced from 800 to 1,000 people daily to come to the stations during the four days and inoculators were sent to the suburbs, in each of which about 300 people were inoculated.

At the end of the four-day period 200 of the inhabitants were apprehended and inoculated, this step bringing further applicants for protection, but in very reduced numbers, no doubt due to the fact that practically the whole population had been immunized. The 200 accused were given suspended sentences and the following day the sanitary cordon was discontinued.

In all, approximately 12,000 persons were immunized, and the epidemic was controlled. About 350 cases of the disease occurred.

PUBLIC HEALTH ENGINEERING ABSTRACTS

North Carolina Oysters. Anon. *Health Bulletin,* North Carolina State Board of Health, vol. 41, No. 2, February, 1926, pp. 3–8. (Abstract by R. E. Tarbett.)

The article covers the subject of North Carolina oysters and the method of carrying on sanitary control as it has been exercised during the past year.

The State board of health, in conjunction with the fisheries commission, has equipped a laboratory boat with which studies have been made of the shellfish-growing areas of North Carolina. In order to pay for this inspection, the oyster tax was increased 1¼ cents per bushel

A considerable percentage of the oysters taken from North Carolina waters are exported in the shell and taken by "buy" boats directly from the gatherers The tax is collected from these "buy" boats, and the inspector, at time of collection of the tax, issues a certificate of origin of the oysters to the captain of the boat. All these boats, in leaving North Carolina waters, must pass through a canal, and they are again boarded by an inspector to see that the captain has the certificate of origin as well as his tax receipt.

The amount of oysters dredged from North Carolina waters in 1926, was over 301,000 bushels. Practically this entire crop was disposed of under foreign label.

Work was also carried on relative to the sanitation of shucking plants.

The Influence of Hydrogen Ion Concentration on the Dose of Alum and the Mechanism of the Action of Alum in the Clarification of Natural Waters. N. L. Banerji (*Indian Jour. Med Research,* 11 (1924), No 3, pp. 695–718). From *Experiment Station Record,* U. S. Department of Agriculture, vol. 54, No. 4, March, 1926, p. 383. (Abstract by Arthur P. Miller)

"Studies are conducted which showed that, with other factors, such as suspended matter, size of particles, and concentration of electrolytes remaining constant, the optimum dose of alum for water

clarification increases and decreases with the pH, and that total hardness is an important factor in regulating the dose

"The mechanism of the action of aluminum sulphate is divided into two parts, due to unhydrolyzed aluminum sulphate and hydrolyzed aluminum sulphate. The positive aluminum ion from the unhydrolyzed portion is the most potent factor in clarification. The dose of alum can be decreased by the preliminary addition of sulphuric acid This is considered to be very important from the standpoint of economy in water clarification in the case of slow sand filters when the suspended matter in river water is very high"

Some Further Observations on the Species Method of Differentiating Fecal Organisms in Surface Waters in the Tropics. A D. Stewart and V G. Raju (*Indian Jour Med Research*, 11 (1924), No 4, pp 1157–1162) From *Experiment Station Record*, U S Department of Agriculture, vol 54, No 4, March, 1926, p 383 (Abstract by Arthur P Miller.)

"Studies are reported which showed that *B coli communis* is a very common organism in human feces, forming 29 per cent of the fecal organisms present and 26 per cent of those in septic tank latrine effluents It is distinctly rarer in cow manure, and forms only 12 per cent of the fecal bacilli. *B coli communis* is much rarer in waters which have received some natural purification, but is present in all waters subject to typical fecal pollution

"The numbers of *B coli communis* isolated from stored water were in marked contrast to those obtained from human feces, in spite of the fact that several of the samples examined had only a short period of storage *B. coli communis* formed only 8 per cent as against 29 per cent in human feces, 26 per cent in septic tank latrine effluents, and 20 per cent in typically polluted river water. *B neapolitanus* formed 37 per cent as against 32 per cent in crude human feces and 28 per cent in latrine effluents This is taken to indicate that this organism is not adversely affected by storage, and, consequently, the number found in stored waters is equal to or greater than that found in freshly polluted waters or crude human feces

"*B. coli communis* was not found at all in any of the waters subjected to prolonged storage, in spite of the fact that it was a predominating organism at the start. *B coscoroba* formed only 3 per cent of the organisms isolated from human feces, whereas in the case of cow manure it formed 20 per cent.

"The results of the examination of septic tank latrine effluents showed a close parallelism to those of human feces in important respects. These results are taken to indicate that the numerical proportion of the main fecal organisms is not materially altered in the course of the passage of the effluents through a septic tank. The storage and natural purification of polluted waters, on the other hand, caused certain important changes to take place in the fecal

flora and tended to alter the relative proportion of the different varieties originally present"

Analytical Study of the Waters of Antietam Creek. T. C. Schaetzle, sr, Asst San Engr, *Engineering Bulletin,* Maryland State Department of Health, vol 1, No. 2, September, 1925, pp. 105–141. (Abstract by T C. Schaetzle)

This article is concerned with a study of the waters of Antietam Creek, between Bridgeport and Funkstown, Md., for the period from September 11, 1923, to August 27, 1924. The investigation was made to determine the degree of pollution of this stream, with special reference to the relation of the biological growths in the stream to the chemical changes taking place therein.

At the time this investigation was begun the city of Hagerstown, with a population of approximately 30,000, was discharging its untreated sewage into Marsh Run, a tributary of Antietam Creek, located between Bridgeport and Funkstown During the period of investigation a Dorrco screen, a part of the sewage treatment plant, was placed in service. The screened sewage discharged into Antietam Creek below Marsh Run

A chemical, bacteriological, and microscopical study of the water from seven stations was made under various weather conditions. The analytical determinations include turbidity, color, suspended solids, total nitrogen, free and albuminoid ammonias, nitrites, nitrates, free carbon dioxide, dissolved oxygen, pH values, total and colon bacteria, and microscopic organisms. In the latter class, diatomaceæ predominated at all stations.

In addition to the tables and charts presented, the following conclusions were drawn: (1) The admission of sewage, whether treated or not, at two distinct points complicates the study of the self-purification of the stream; (2) the stream has not returned fully to its normal condition 2 miles below the sewage works discharge; (3) the discharge of screened sewage instead of raw sewage did not change materially the physical appearance of the stream a few hundred feet below the point of sewage discharge; (4) the entrance of organic matter into the stream increases the plant and animal life, (5) conditions on the bottom of the stream, with reference to the microscopic organisms, are of the same general nature as those existing in water, (6) the relation between the numbers of bacteria, algae, protozoa, and rotifera present in the waters of Antietam Creek and the organic pollution of the stream is established, but it is not conclusive enough to be of obvious diagnostic value; (7) the bacterial counts and some of the chemical constituents show clearly the pollution and dilution effects of Antietam Creek, with the subsequent self-purification of the stream; (8) the same general variations in the characteristics of the creek, due to seasonal changes and rainfall, occur above as well as below the points of sewage pollution.

COURT DECISIONS RELATING TO PUBLIC HEALTH

Increase in sum allowed by parish police jury for health work compelled.—(Louisiana Supreme Court; State ex rel Parish Board of Health of Calcasieu Parish *v.* Police Jury of Calcasieu Parish, 108 So. 104; decided March 29, 1926.) The board of health of Calcasieu Parish brought a mandamus proceeding to compel the police jury of the parish to budget and appropriate the sum of $5,251 for the operation and support of the board of health during the year 1926. Said sum was the estimate of expenses adopted by the board of health, but the police jury had placed in the budget the sum of $1,000. The police jury contended that it was the final arbiter in such matters in case of disagreement, but the supreme court held that under Act 79 of 1921 the board of health could by mandamus compel "proper action" by the police jury in the matter of budgeting, appropriating, or paying for "all necessary expenses, costs, and charges of local sanitation." The supreme court increased the amount of $1,000 allowed in the budget by the police jury to $3,600.

Payment of fees of local registrar of vital statistics.—(Missouri Supreme Court, State ex rel. Mitchell *v.* Rose et al., County Judges, 281 S. W. 396; decided March 15, 1926.) In a proceeding to compel the county court to pay to a local registrar of vital statistics the amount certified to the county court by the State registrar of vital statistics as due said local registrar, the supreme court held that, although the legislature had the power to provide for the payment of the fees to which a local registrar might be entitled out of the county treasury, it could not take away from the county court the right to call in question both the facts and the law on which the payment of such fees was demanded.

Payment of salary of purchasing agent for State detention home compelled.—(Colorado Supreme Court; Davis, State Auditor, *v.* Morley, 244 P. 599; decided March 8, 1926.) The purchasing agent for the State detention home, appointed by the State board of health pursuant to statutory authority, brought action for mandamus to compel the State auditor to issue warrants for his salary. The supreme court affirmed the judgment of the lower court awarding a writ of mandamus and held that the motive or intent of the State board of health in appointing the purchasing agent was irrelevant.

Additional tax for sanitary work held unlawful.—(California First District Court of Appeal; Spreckels *v* City and County of San Francisco, 244 P. 919; decided January 20, 1926.) One of the points decided in this case was that a tax, levied in the fiscal year 1910–11 by the city and county of San Francisco for the purpose of providing for the continuance of sanitary measures against bubonic plague, was for wholly preventive measures where cases of plague had not existed

in the municipality after 1907, and the situation was not one of "great necessity or emergency" within the meaning of the charter at that time warranting a temporary suspension of the limitation on the rate of taxation and the levy of an additional tax.

Enjoining of maternity hospital refused—(Texas Court of Civil Appeals; Perry et al. *v.* Ripley et al, 282 S W 329; decided February 13, 1926) Where a maternity hospital was conducted in conformity to law and there had been no abuse of discretion on the part of the local health officer in approving the application for license or on the part of the State board of health in granting the license, an injunction to restrain the operation of the hospital on the ground that the same might become a nuisance was refused by the court of civil appeals

Abattoir held to be a necessary municipal expense.—(North Carolina Supreme Court; Moore *v.* City of Greensboro, 132 S. E 565; decided April 14, 1926) The city council of Greensboro passed an ordinance providing for the sale of bonds for the purpose of buying a site and erecting thereon and equipping an abattoir; also the levy and collection of a tax annually for the payment of the interest and principal was provided for. The ordinance was not submitted to the voters of the city. In a suit to enjoin the city from issuing the bonds on the ground that an abattoir was not a necessary municipal expense, the supreme court held that it was a necessary expense within the meaning of section 7 of article 7 of the State constitution, and, therefore, the ordinance did not have to be submitted to the voters

Estoppel to complain of use of public incinerator.—(Kentucky Court of Appeals; Karcher *v.* City of Louisville, 281 S. W. 1010; decided March 26, 1926.) Where the plaintiff had negotiated the sale of an incinerator plant owned by his wife to the defendant city, knowing that the incinerator was to be employed by the city in the burning and destruction of garbage and dead animals, the court of appeals held that the plaintiff was estopped to complain of the city's use of the incinerator for the purpose for which it was intended.

DEATHS DURING WEEK ENDED JULY 24, 1926

Summary of information received by telegraph from industrial insurance companies for week ended July 24, 1926, and corresponding week of 1925. (From the Weekly Health Index, July 28, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended July 24, 1926	Corresponding week, 1925
Policies in force	64, 999, 105	60, 602, 704
Number of death claims	11, 099	10, 133
Death claims per 1,000 policies in force, annual rate	8. 9	8. 7

Deaths from all causes in certain large cities of the United States during the week ended July 24, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, July 28, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended July 24, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended July 24, 1926 [2]
	Total deaths	Death rate [1]		Week ended July 24, 1926	Corresponding week, 1925	
Total (66 cities)	6,494	11.7	10.2	766	776	[3] 60
Akron	40			4	3	43
Albany [4]	41	18.0	13.3	1	5	21
Atlanta	84			21	5	
White	35			9		
Colored	49	([5])		12		
Baltimore [4]	206	13.3	10.7	26	38	76
White	158			16		57
Colored	48	([5])		10		162
Birmingham	66	16.3	9.9	5	8	
White	36			3		
Colored	30	([5])		2		
Boston	199	13.2	12.2	26	27	73
Bridgeport	30			5	1	85
Buffalo	129	12.4	11.7	18	21	75
Cambridge	30	12.8	7.4	2	2	33
Camden	16	6.4	10.1	2	4	34
Canton	22	10.4	8.3	2	5	44
Chicago [4]	612	10.5	9.6	69	74	61
Cincinnati	133	16.9	12.2	20	16	124
Cleveland	183	9.9	7.2	21	15	54
Columbus	83	15.2	11.0	8	10	73
Dallas	44	11.5	15.4	8	13	
White	36			6		
Colored	8	([5])		2		
Dayton	51	15.0	11.2	5	6	79
Denver	62	11.3	12.8	7	11	
Des Moines	35	12.5	6.6	1	1	17
Detroit	281	11.4	9.5	57	39	92
Duluth	27	12.5	8.0	1	2	23
El Paso	37	17.7	17.4	6	11	
Erie	29			4	1	76
Fall River [4]	20	8.0	12.9	5	2	73
Flint	29	11.0	5.6	3	4	50
Fort Worth	19	6.2	13.3	0	6	
White	17			0		
Colored	2	([5])		0		
Grand Rapids	28	9.4	4.4	4	0	58
Houston	31			0	5	
White	22			0		
Colored	9	([5])		0		
Indianapolis	83	11.8	13.2	11	17	81
White	68			11		93
Colored	15			0		0
Jersey City	65	10.7	9.6	9	0	64
Kansas City, Kans.	28	12.5	10.8	2	3	35
White	22			1		21
Colored	6	([5])		1		131
Kansas City, Mo.	86	12.0	10.6	6	9	
Los Angeles	216			15	27	42
Louisville	100	16.8	11.2	16	10	138
White	75			12		120
Colored	25	([5])		4		251
Lowell	21			0	2	0
Lynn	25	12.5	6.6	3	1	75
Memphis	77	22.7	17.3	8	5	
White	33			2		
Colored	44	([5])		6		
Milwaukee	104	10.5	8.2	18	10	83
Minneapolis	78	9.4	7.7	9	2	50
Nashville [4]	51	19.4	17.2	10	2	
White	33			7		
Colored	18	([5])		3		

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 64 cities.
[4] Deaths for week ended Friday, July 23, 1926.
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Kansas City, Kans., 14; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Norfolk, 38; Richmond, 32; and Washington, D. C., 25.

Deaths from all causes in certain large cities of the United States during the week ended July 24, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, July 28, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended July 24, 1926: Total deaths	Week ended July 24, 1926: Death rate	Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year: Week ended July 24, 1926	Deaths under 1 year: Corresponding week, 1925	Infant mortality rate, week ended July 24, 1926
New Bedford	20			5	2	87
New Haven	33	9.5	10.2	2	6	27
New Orleans	115	14.3	17.5	22	21	
White	72			13		
Colored	43	(5)		9		
New York	1,231	10.8	9.2	120	135	49
Bronx borough	163	9.4	8.5	8	10	27
Brooklyn borough	435	10.1	7.1	54	41	55
Manhattan borough	460	12.8	12.5	43	69	47
Queens borough	137	9.4	6.6	12	14	51
Richmond borough	36	13.1	14.0	3	1	53
Newark, N. J.	90	10.2	9.3	16	12	77
Norfolk	37	11.1	8.9	4	8	74
White	14			2		59
Colored	23	(5)		2		99
Oakland	46	9.2	8.6	3	4	35
Oklahoma City	30			3	8	
Omaha	50	12.1	13.3	0	4	63
Paterson	25	9.1	8.8	2	1	35
Philadelphia	395	10.3	9.0	38	37	50
Pittsburgh	156	12.8	10.4	21	24	80
Portland, Oreg.	39			0	3	0
Providence	59	11.2	9.1	6	3	50
Richmond	63	17.4	14.0	11	6	138
White	32			6		118
Colored	31	(5)		5		175
Rochester	62	10.1	11.7	1	14	8
St. Louis	216	13.6	13.1	28	30	
St. Paul	45	9.5	11.7	3	7	27
Salt Lake City [4]	29	11.4	9.2	4	1	55
San Antonio	60	15.3	16.6	12	17	
San Diego	38	18.0	16.2	5	4	105
San Francisco	131	12.0	10.7	7	6	42
Schenectady	13	7.3	6.7	0	2	0
Seattle	60			3	10	28
Somerville	19	9.9	10.5	5	3	130
Spokane	24	11.5	8.1	4	1	91
Springfield, Mass.	33	11.9	8.8	3	5	43
Syracuse	49	13.9	8.0	4	3	51
Tacoma	19	9.3	14.0	1	2	23
Toledo	70	12.4	11.2	7	7	68
Trenton	32	12.5	11.5	6	4	100
Utica	41	20.8	13.3	8	3	176
Washington, D. C.	147	14.5	12.3	12	17	68
White	82			7		58
Colored	65	(5)		5		91
Waterbury	19			5	4	107
Wilmington, Del.	17	7.1	9.1	1	1	23
Worcester	44	11.9	10.1	6	4	60
Yonkers	18	8.1	6.0	0	2	0
Youngstown	37	11.7	7.2	6	3	76

[4] Deaths for week ended Friday, July 23, 1926.
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Kansas City, Kans., 14; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Norfolk, 38; Richmond, 32; and Washington, D. C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended July 31, 1926

ALABAMA

	Cases
Cerebrospinal meningitis	1
Chicken pox	2
Diphtheria	9
Malaria	76
Measles	34
Mumps	20
Pellagra	16
Pneumonia	16
Scarlet fever	6
Smallpox	11
Tuberculosis	77
Typhoid fever	109
Whooping cough	25

ARIZONA

	Cases
Measles	3
Mumps	1
Scarlet fever	1
Tuberculosis	1

ARKANSAS

	Cases
Chicken pox	6
Diphtheria	1
Influenza	21
Malaria	107
Measles	12
Mumps	9
Paratyphoid fever	7
Pellagra	24
Scarlet fever	6
Trachoma	2
Tuberculosis	9
Typhoid fever	69
Whooping cough	20

CALIFORNIA

	Cases
Chicken pox	45
Diphtheria	90
Influenza	1

CALIFORNIA—continued

	Cases
Lethargic encephalitis—Glendale	1
Measles	151
Mumps	46
Poliomyelitis	
Alameda County	1
Fresno	1
Glendora	1
Los Angeles	1
Rabies (human)—Huntington Park	1
Scarlet fever	58
Smallpox	15
Tuberculosis	199
Typhoid fever	19
Whooping cough	75

CONNECTICUT

	Cases
Cerebrospinal meningitis	1
Chicken pox	9
Diphtheria	9
German measles	4
Influenza	1
Measles	25
Mumps	3
Paratyphoid fever	1
Pneumonia (broncho)	16
Pneumonia (lobar)	9
Poliomyelitis	2
Scarlet fever	16
Septic sore throat	2
Tetanus	1
Tuberculosis (all forms)	28
Typhoid fever	4
Whooping cough	32

DELAWARE

	Cases
Malaria	1
Scarlet fever	1
Tuberculosis	3
Whooping cough	5

FLORIDA

	Cases
Cerebrospinal meningitis	3
Dengue	1
Diphtheria	19
Influenza	110
Lethargic encephalitis	1
Malaria	17
Measles	11
Mumps	8
Pneumonia	110
Poliomyelitis	3
Scarlet fever	3
Smallpox	16
Tetanus	2
Tuberculosis	112
Typhoid fever	21
Whooping cough	18

GEORGIA

	Cases
Cerebrospinal meningitis	1
Chicken pox	1
Dengue	2
Diphtheria	5
Dysentery	19
Influenza	13
Malaria	44
Measles	15
Mumps	4
Paratyphoid fever	6
Pellagra	14
Pneumonia	5
Scarlet fever	4
Septic sore throat	4
Smallpox	3
Tuberculosis	20
Typhoid fever	92
Whooping cough	16

IDAHO

	Cases
Cerebrospinal meningitis	1
Chicken pox	1
Diphtheria	1
Measles	2
Scarlet fever	1
Smallpox	4
Tuberculosis	1
Typhoid fever	2

ILLINOIS

	Cases
Cerebrospinal meningitis	
Jackson County	1
Lake County	3
Chicken pox	82
Diphtheria	41
Influenza	98
Lethargic encephalitis—Saline County	1
Measles	243
Mumps	20
Pneumonia	226
Poliomyelitis	
Cook County	1
Lake County	1
Wabash County	1
Scarlet fever	72
Smallpox	10
Tuberculosis	387
Typhoid fever	38
Whooping cough	201

[1] Week ended Friday.

INDIANA

	Cases
Cerebrospinal meningitis	2
Chicken pox	4
Diphtheria	11
Influenza	7
Measles	55
Scarlet fever	28
Smallpox	2[illegible]
Tuberculosis	41
Typhoid fever	28
Whooping cough	125

IOWA

	Cases
Chicken pox	4
Diphtheria	14
German measles	1
Measles	4
Scarlet fever	23
Smallpox	8
Tuberculosis	20
Typhoid fever	3
Whooping cough	9

KANSAS

	Cases
Chicken pox	6
Diphtheria	8
German measles	3
Leprosy	1
Measles	23
Mumps	8
Pneumonia	5
Poliomyelitis	
Topeka	1
Wichita	1
Scarlet fever	12
Smallpox	4
Trachoma	1
Tuberculosis	40
Typhoid fever	25
Whooping cough	117

LOUISIANA

	Cases
Diphtheria	11
Influenza	16
Malaria	25
Paratyphoid fever	1
Pneumonia	15
Scarlet fever	4
Tuberculosis	35
Typhoid fever	33
Whooping cough	6

MAINE

	Cases
Chicken pox	12
Diphtheria	2
Measles	48
Mumps	8
Pneumonia	2
Scarlet fever	21
Tuberculosis	8
Typhoid fever	2
Vincent's angina	1
Whooping cough	59

MARYLAND [1]

	Cases
Cerebrospinal meningitis	1
Chicken pox	17
Diphtheria	8
Dysentery	9

MARYLAND—continued

	Cases
Impetigo contagiosa	4
Influenza	2
Lethargic encephalitis	4
Malaria	1
Measles	39
Mumps	16
Paratyphoid fever	1
Pneumonia (broncho)	7
Pneumonia (lobar)	6
Poliomyelitis	3
Scarlet fever	17
Septic sore throat	1
Tetanus	5
Tuberculosis	75
Typhoid fever	16
Whooping cough	107

MASSACHUSETTS

Cerebrospinal meningitis	4
Chicken pox	51
Conjunctivitis (suppurative)	2
Diphtheria	38
German measles	6
Influenza	1
Lethargic encephalitis	4
Malaria	1
Measles	83
Mumps	24
Ophthalmia neonatorum	37
Pellagra	2
Pneumonia (lobar)	24
Poliomyelitis	10
Scarlet fever	97
Septic sore throat	3
Tetanus	1
Tuberculosis (pulmonary)	107
Tuberculosis (other forms)	25
Typhoid fever	17
Whooping cough	120

MICHIGAN

Diphtheria	66
Measles	88
Pneumonia	24
Scarlet fever	108
Smallpox	6
Tuberculosis	338
Typhoid fever	11
Whooping cough	137

MINNESOTA

Cerebrospinal meningitis	2
Chicken pox	12
Diphtheria	31
Influenza	2
Lethargic encephalitis	1
Measles	80
Poliomyelitis	2
Scarlet fever	90
Smallpox	2
Tuberculosis	57
Typhoid fever	5
Whooping cough	51

MISSISSIPPI

	Cases
Diphtheria	6
Poliomyelitis	1
Scarlet fever	3
Smallpox	2
Typhoid fever	55

MISSOURI

Cerebrospinal meningitis	1
Chicken pox	7
Diphtheria	31
Influenza	1
Measles	37
Mumps	1
Pneumonia	1
Rabies	2
Scarlet fever	29
Smallpox	2
Trachoma	3
Tuberculosis	38
Typhoid fever	26
Whooping cough	56

MONTANA

Cerebrospinal meningitis	1
German measles	2
Measles	1
Mumps	5
Rocky Mountain spotted fever—Stevensville	1
Scarlet fever	8
Tuberculosis	2
Typhoid fever	6
Whooping cough	8

NEBRASKA

Chicken pox	1
Diphtheria	2
Measles	6
Mumps	2
Pneumonia	7
Poliomyelitis	1
Scarlet fever	6
Septic sore throat	3
Smallpox	3
Tuberculosis	6
Typhoid fever	2
Whooping cough	15

NEW JERSEY

Cerebrospinal meningitis	2
Chicken pox	17
Diphtheria	41
Influenza	2
Measles	57
Pneumonia	33
Poliomyelitis	3
Scarlet fever	40
Typhoid fever	6
Whooping cough	120

NEW MEXICO

Conjunctivitis	2
Diphtheria	4
Lethargic encephalitis	1
Mumps	1

NEW MEXICO—continued

	Cases
Pellagra	1
Rabies (in animals)	1
Scarlet fever	1
Tuberculosis	46
Typhoid fever	3
Whooping cough	7

NEW YORK

(Exclusive of New York City)

	Cases
Chicken pox	71
Diphtheria	63
Dysentery	2
German measles	41
Lethargic encephalitis	2
Malaria	4
Measles	397
Mumps	31
Paratyphoid fever	5
Pneumonia	68
Poliomyelitis	17
Scarlet fever	39
Septic sore throat	1
Smallpox	3
Typhoid fever	22
Vincent's angina	15
Whooping cough	261

NORTH CAROLINA

	Cases
Cerebrospinal meningitis	1
Chicken pox	18
Diphtheria	14
German measles	17
Measles	90
Poliomyelitis	1
Scarlet fever	18
Septic sore throat	2
Smallpox	22
Typhoid fever	106
Whooping cough	310

OREGON

	Cases
Chicken pox	7
Diphtheria	26
Influenza	7
Malaria	4
Measles	10
Mumps	3
Pneumonia	[2] 1
Scarlet fever	16
Septic sore throat	1
Smallpox	14
Tuberculosis	[2] 4
Typhoid fever	17
Whooping cough	9

PENNSYLVANIA

	Cases
Chicken pox	55
Diphtheria	100
German measles	4
Lethargic encephalitis—Philadelphia	1
Measles	430
Mumps	13
Pneumonia	6
Scarlet fever	110

[2] Deaths

PENNSYLVANIA—continued

	Cases
Tuberculosis	104
Typhoid fever	32
Whooping cough	362

RHODE ISLAND

	Cases
Diphtheria	3
German measles	3
Measles	5
Pneumonia	2
Tuberculosis	12
Whooping cough	29

SOUTH DAKOTA

	Cases
Diphtheria	2
Measles	6
Scarlet fever	7
Smallpox	3
Trachoma	2
Tuberculosis	2
Typhoid fever	1
Whooping cough	8

TENNESSEE

	Cases
Chicken pox	4
Diphtheria	3
Influenza	2
Malaria	50
Measles	10
Pellagra	44
Pneumonia	5
Scarlet fever	5
Smallpox	2
Tuberculosis	45
Typhoid fever	
Maury County	9
Nashville	16
Scattering	105
Whooping cough	35

TEXAS

	Cases
Diphtheria	7
Measles	1
Poliomyelitis	1
Scarlet fever	4
Smallpox	1
Tuberculosis	3
Typhoid fever	9
Whooping cough	3

UTAH

	Cases
Cerebrospinal meningitis—Brigham	1
Chicken pox	5
Diphtheria	10
German measles	2
Measles	7
Mumps	5
Smallpox	8
Typhoid fever	1
Whooping cough	49

VERMONT

	Cases
Chicken pox	5
Diphtheria	1
Measles	13
Mumps	9
Typhoid fever	1
Whooping cough	59

VIRGINIA

	Cases
Cerebrospinal meningitis—Hanover County	1
Poliomyelitis—Hanover County	1

WASHINGTON

Cerebrospinal meningitis	
Spokane	1
Walla Walla County	1
Chicken pox	17
Diphtheria	21
German measles	4
Measles	25
Mumps	4
Scarlet fever	21
Smallpox	18
Tuberculosis	39
Typhoid fever	7
Whooping cough	43

WEST VIRGINIA

Cerebrospinal meningitis	
McDowell County	1
Wyoming County	1
Chicken pox	7
Diphtheria	7
Measles	77
Scarlet fever	16
Smallpox	7
Tuberculosis	36
Typhoid fever	19
Whooping cough	49

WISCONSIN

	Cases
Milwaukee	
Cerebrospinal meningitis	1
Chicken pox	19
Diphtheria	14
German measles	1
Influenza	1
Measles	61
Mumps	5
Pneumonia	5
Scarlet fever	5
Tuberculosis	36
Whooping cough	97
Scattering	
Chicken pox	34
Diphtheria	16
German measles	10
Influenza	7
Lethargic encephalitis	1
Measles	345
Mumps	54
Pneumonia	4
Poliomyelitis	2
Scarlet fever	48
Smallpox	1
Tuberculosis	26
Typhoid fever	5
Whooping cough	109

WYOMING

Chicken pox	1
German measles	2
Measles	7
Mumps	2
Rocky Mountain spotted fever—Fremont County	1
Scarlet fever	7
Whooping cough	15

Report for Week Ended July 24, 1926

NORTH DAKOTA

	Cases
Chicken pox	3
Diphtheria	5
Measles	19
Mumps	2
Pneumonia	4
Scarlet fever	15
Smallpox	1
Tuberculosis	2
Typhoid fever	1
Whooping cough	52

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Dipththeria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
June, 1926										
Alabama	3	19	27	144	1,063	102	3	18	122	99
Idaho	2	23	0	0	39	0	0	20	35	9
Maine	3	16	4	0	679	2	2	52	0	15
Montana	7	43	17		297		1	59	24	4
Oregon	8	75	46	1	346		3	169	162	23
Virginia	4	58	406	145	2,270	32	2	186	93	80
Washington	17	53	19		443		2	186	103	24

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of June, 1926, to other State health departments by departments of health of certain States

Referred by—	Diphtheria	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever
Connecticut			1		1
Illinois			4	11	1
Minnesota	1	1		27	2
New York	3	1	2		1
Washington					1

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended July 17, 1926, 37 States reported 772 cases of diphtheria For the week ended July 18, 1925, the same States reported 772 cases of this disease One hundred and one cities, situated in all parts of the country and having an aggregate population of nearly 30,430,000, reported 547 cases of diphtheria for the week ended July 17, 1926 Last year for the corresponding week they reported 435 cases. The estimated expectancy for these cities was 613 cases The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-four States reported 3,565 cases of measles for the week ended July 17, 1926, and 1,414 cases of this disease for the week ended July 18, 1925 One hundred and one cities reported 1,254 cases of measles for the week this year and 880 cases last year.

Poliomyelitis.—The health officers of 37 States reported 53 cases of poliomyelitis for the week ended July 17, 1926. The same States reported 148 cases for the week ended July 18, 1925.

Scarlet fever —Scarlet fever was reported for the week as follows: Thirty-seven States—this year, 1,130 cases; last year, 766 cases; 101 cities—this year, 545 cases; last year, 335 cases, estimated expectancy, 345 cases

Smallpox.—For the week ended July 17, 1926, 37 States reported 290 cases of smallpox Last year for the corresponding week they reported 260 cases One hundred and one cities reported smallpox for the week as follows: 1926, 41 cases; 1925, 82 cases; estimated expectancy, 61 cases One death from smallpox was reported by these cities for the week this year—at Omaha, Nebr

Typhoid fever.—Seven hundred and six cases of typhoid fever were reported for the week ended July 17, 1926, by 36 States. For the corresponding week of 1925, the same States reported 993 cases of this disease One hundred and one cities reported 126 cases of typhoid fever for the week this year and 208 cases for the corresponding week last year. The estimated expectancy for these cities was 155 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 95 cities, with a population of more than 29,700,000 as follows: 1926, 367 deaths; 1925, 317 deaths.

City reports for week ended July 17, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	0	0	0	0	0	4	0	3
New Hampshire									
Concord	22,546	0	0	1	0	0	4	0	2
Manchester	83,097	0	1	0	0	0	0	0	1
Vermont									
Barre	10,008	2	0	0	0	0	0	0	1
Massachusetts									
Boston	779,620	24	39	20	0	0	32	38	12
Fall River	128,993	3	3	1	0	0	2	3	0
Springfield	142,065	1	2	0	0	0	2	0	0
Worchester	190,757	0	2	3	0	0	3	0	1
Rhode Island									
Pawtucket	69,760	0	1	0	0	0	0	0	1
Providence	267,918	0	4	3	0	0	17	0	1
Connecticut									
Bridgeport	(1)	1	4	3	0	0	2	0	0
Hartford	160,197	1	3	2	0	0	1	0	2
New Haven	178,927	1	1	0	0	0	9	0	1
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	4	8	12	0	0	6	2	7
New York	5,873,356	64	177	109	17	6	66	47	102
Rochester	316,786	2	5	5	0	1	2	0	2
Syracuse	182,003	13	4	1	0	0	99	2	2
New Jersey									
Camden	128,642	2	2	3	0	0	4	0	0
Newark	452,513	11	11	6	2	0	12	5	5
Trenton	132,020	0	2	2	0	0	7	1	1
Pennsylvania:									
Philadelphia	1,979,364	44	43	55		1	57	4	27
Pittsburgh	631,563	24	13	10		0	2	0	0
Reading	112,707	2	2	0		0	4	0	2
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	1	6	6	0	1	28	6	11
Cleveland	936,485	71	6	40	1	1	13	1	9
Columbus	279,836	3	2	5	0	0	12	0	1
Toledo	287,380	26	4	1	0	1	29	0	4
Indiana:									
Fort Wayne	97,846	1	2	1	0	0	7	0	3
Indianapolis	358,819	10	4	1	0	1	5	0	2
South Bend	80,091	0	0	3	0	0	8	0	2
Terre Haute	71,071	0	0	0	0	0	1	0	0
Illinois									
Chicago	2,995,239	120	69	35	4	2	183	16	16
Peoria	81,564	0	1	0	0	0	13	1	1
Springfield	63,923	2	0	2	1	1	8	1	1
Michigan									
Detroit	1,245,824	19	29	51	2	0	16	5	11
Flint	130,316	1	3	1	0	0	33	0	2
Grand Rapids	153,698	3	3	0	0	0	15	0	0

1 No estimate made

City reports for week ended July 17, 1926—Continued

Division, State, and city	Population July 1, 1925 estimated	Chicken pox cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Wisconsin									
Kenosha	50,891	0	1	1	0	0	75	0	0
Madison	46,385	4	0	0	0	0	7	0	0
Milwaukee	509,192	37	10	13	0	0	131	21	8
Racine	67,707	1	1	0	0	0	63	1	2
Superior	39,671	0	0	2	0	0	3	0	0
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	1	0	0	0	0	1	0	0
Minneapolis	425,435	17	10	17	0	0	2	1	3
St. Paul	246,001	3	10	9	0	0	29	0	5
Iowa									
Davenport	52,469	0	0	1	0	--------	0	0	--------
Sioux City	76,411	0	1	2	0	--------	0	0	--------
Waterloo	36,771	0	0	0	0	--------	13	0	--------
Missouri									
Kansas City	367,481	0	3	1	0	0	8	0	4
St. Joseph	78,342	0	0	0	0	0	1	0	1
St. Louis	821,543	3	19	23	0	0	27	2	--------
North Dakota									
Fargo	26,403	--------	0	0	0	0	4	8	0
Grand Forks	14,811	--------	0	--------	--------	--------	--------	--------	--------
South Dakota									
Aberdeen	15,036	0	0	0	0	--------	3	2	--------
Sioux Falls	30,127	--------	0	--------	--------	--------	--------	--------	--------
Nebraska									
Lincoln	60,941	3	0	0	0	0	4	1	0
Omaha	211,768	2	4	0	0	0	10	0	4
Kansas									
Topeka	55,411	1	0	0	0	0	0	0	0
Wichita	88,367	0	0	1	0	0	0	0	0
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	1	1	0	0	0	0	0	2
Maryland									
Baltimore	796,296	15	11	8	1	2	12	18	9
Cumberland	33,741	0	0	0	0	0	0	0	1
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia									
Washington	497,906	3	4	2	0	0	31	0	5
Virginia									
Lynchburg	30,395	1	0	1	0	0	10	0	0
Norfolk	(1)	2	0	0	0	0	4	0	1
Richmond	186,403	1	1	3	0	1	18	1	1
Roanoke	58,208	0	0	0	0	0	2	1	0
West Virginia									
Charleston	49,019	0	0	0	0	0	2	0	1
Huntington	63,485	0	0	1	0	0	0	0	0
Wheeling	56,208	2	0	1	0	0	6	0	1
North Carolina									
Raleigh	30,371	0	0	1	0	0	0	0	0
Wilmington	37,061	0	0	0	0	0	0	0	1
Winston-Salem	69,031	--------	0	0	0	0	14	--------	1
South Carolina									
Charleston	73,125	0	0	0	7	0	1	0	2
Columbia	41,225	1	0	0	0	0	0	0	0
Greenville	27,311	0	0	0	0	0	1	0	0
Georgia									
Atlanta	(1)	2	2	1	3	0	5	1	1
Brunswick	16,809	0	0	0	0	0	0	0	1
Savannah	93,134	0	0	0	3	0	1	1	0
Florida									
Miami	69,754	0	--------	6	0	0	0	0	1
St. Petersburg	26,847	--------	0	--------	--------	0	--------	--------	1
Tampa	94,743	0	0	0	0	0	1	0	2

[1] No estimate made.

City reports for week ended July 17, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	1	0	0	0	0	0	2
Louisville	305,935	0	2	3	2	0	3	0	2
Tennessee									
Memphis	174,533	2	1	0	0	1	14	1	6
Nashville	136,220	0	0	1	0	1	1	0	4
Alabama									
Birmingham	205,670	0	1	0	0	1	14	1	7
Mobile	65,955	0	0	0	0	1	0	0	0
Montgomery	46,481	0	0	0	1	0	1	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	0	0	0	--------	0	1	--------
Little Rock	74,216	1	0	1	0	0	2	0	2
Louisiana									
New Orleans	414,493	0	5	2	1	1	0	0	6
Shreveport	57,857	0	0	0	0	0	0	0	1
Oklahoma									
Oklahoma City	(1)	0	0	0	0	1	0	0	2
Texas									
Dallas	194,450	0	2	0	1	1	0	0	1
Galveston	48,375	0	0	0	0	0	0	0	1
Houston	164,954	0	1	2	0	0	0	0	2
San Antonio	198,069	0	1	1	0	0	2	0	5
MOUNTAIN									
Montana									
Billings	17,971	0	0	0	0	0	0	0	0
Great Falls	29,883	1	0	0	0	0	11	0	0
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	0	0	0	0	0	0	0	0
Idaho									
Boise	23,042	0	0	0	0	0	0	0	0
Colorado									
Denver	280,911	15	8	10	--------	1	7	1	1
Pueblo	43,787	0	1	0	0	0	1	0	1
New Mexico									
Albuquerque	21,000	1	1	0	0	0	0	0	1
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	1
Utah									
Salt Lake City	130,948	2	2	2	0	0	2	2	2
Nevada									
Reno	12,665	0	0	0	0	0	0	1	0
PACIFIC									
Washington									
Seattle	(1)	8	4	5	0	--------	11	2	--------
Spokane	108,897	15	1	1	0	--------	36	0	--------
Tacoma	104,455	8	2	2	0	0	3	1	1
Oregon									
Portland	282,383	5	4	1	0	0	12	2	0
California									
Los Angeles	(1)	15	31	43	0	1	5	5	9
Sacramento	72,260	0	2	2	0	0	1	1	0
San Francisco	557,530	9	11	6	0	0	66	5	3

[1] No estimate made

City reports for week ended July 17, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine											
Portland	1	0	0	0	0	0	1	0	0	0	16
New Hampshire											
Concord	0	0	0	0	0	0	0	0	0	2	12
Manchester	0	0	0	0	0	0	0	0	0	0	15
Vermont											
Barre	0	0	0	0	0	0	0	0	0	0	7
Massachusetts											
Boston	18	31	0	0	0	9	2	3	1	41	166
Fall River	1	0	0	0	0	3	0	1	0	2	20
Springfield	2	1	0	0	0	1	0	0	0	0	21
Worcester	2	3	0	0	0	2	1	0	0	0	32
Rhode Island											
Pawtucket	0	0	0	0	0	0	0	0	0	0	11
Providence	3	1	0	0	0	0	0	0	0	7	55
Connecticut											
Bridgeport	3	3	1	0	0	2	0	1	0	3	24
Hartford	2	3	0	0	0	2	1	0	0	14	41
New Haven	1	0	0	0	0	1	2	0	0	0	35
MIDDLE ATLANTIC											
New York											
Buffalo	9	0	0	0	0	18	1	0	0	4	128
New York	53	95	1	1	0	[1] 99	21	10	0	77	1,170
Rochester	5	1	0	0	0	4	1	1	0	7	62
Syracuse	4	2	0	0	0	3	1	1	0	52	45
New Jersey											
Camden	1	0	0	0	0	2	0	0	0	2	19
Newark	7	8	0	2	0	10	1	2	0	29	64
Trenton	0	0	0	0	0	6	1	3	0	1	42
Pennsylvania											
Philadelphia	28	32	0	0	0	28	7	5	0	44	419
Pittsburgh	11	7	1	0	0	3	3	0	0	77	65
Reading	1	2	0	0	0	2	1	0	0	9	21
EAST NORTH CENTRAL											
Ohio											
Cincinnati	4	9	1	0	0	11	1	4	1	10	124
Cleveland	10	26	2	1	0	14	2	0	0	58	154
Columbus	2	5	1	0	0	1	1	0	0	4	63
Toledo	4	3	1	0	0	7	1	0	0	47	53
Indiana											
Fort Wayne	0	2	1	4	0	2	0	0	0	3	42
Indianapolis	3	1	2	3	0	6	1	0	0	22	59
South Bend	1	0	0	0	0	0	1	1	0	0	18
Terre Haute	1	0	0	0	0	0	0	0	0	4	15
Illinois											
Chicago	34	62	1	0	0	48	4	2	0	48	545
Peoria	1	1	0	0	0	0	0	0	0	8	20
Springfield	1	3	0	0	0	0	1	0	0	10	9
Michigan											
Detroit	29	47	4	0	0	18	4	1	2	81	230
Flint	2	9	0	0	0	0	0	0	0	3	26
Grand Rapids	2	5	0	1	0	0	0	0	0	5	21
Wisconsin:											
Kenosha	1	1	2	0	0	0	0	1	0	7	5
Madison	0	0	1	0	0	0	0	0	0	2	10
Milwaukee	12	3	2	0	0	11	1	0	0	74	104
Racine	2	0	0	0	0	1	0	0	0	13	12
Superior	1	1	2	0	0	1	0	0	0	0	9
WEST NORTH CENTRAL											
Minnesota											
Duluth	3	1	2	0	0	0	0	0	0	1	11
Minneapolis	10	30	3	0	0	4	1	1	0	3	85
St Paul	7	20	2	0	0	4	2	0	0	18	58

[1] Pulmonary tuberculosis only.

City reports for week ended July 17, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST NORTH CENTRAL—contd											
Iowa											
Davenport	0	0	1	0	-------	-------	0	0	-------	3	-------
Sioux City	1	4	1	6	-------	-------	0	2	-------	1	-------
Waterloo	1	0	0	0	-------	-------	0	0	-------	4	-------
Missouri											
Kansas City	2	1	0	4	0	6	2	0	0	9	65
St Joseph	1	0	1	0	0	0	-------	0	0	2	23
St Louis	7	23	0	0	0	12	5	4	0	45	199
North Dakota											
Fargo	1	1	1	0	0	0	0	0	0	-------	4
Grand Forks	1	-------	0	-------	-------	-------	0	-------	-------	-------	-------
South Dakota											
Aberdeen	0	2	0	0	-------	-------	0	0	-------	3	-------
Sioux Falls	0	-------	0	-------	-------	-------	0	-------	-------	-------	-------
Nebraska											
Lincoln	0	2	0	3	0	0	1	0	0	11	17
Omaha	1	10	3	3	1	0	0	0	0	3	45
Kansas											
Topeka	1	2	0	0	0	0	1	0	0	15	14
Wichita	0	0	1	0	0	1	1	0	0	16	15
SOUTH ATLANTIC											
Delaware:											
Wilmington	1	1	0	0	0	0	1	0	0	2	28
Maryland											
Baltimore	7	9	0	0	0	9	6	5	0	97	186
Cumberland	1	0	0	0	0	1	0	0	0	0	8
Frederick	0	0	0	0	0	0	0	0	0	0	-------
District of Columbia.											
Washington	4	7	0	0	0	7	4	2	0	23	108
Virginia:											
Lynchburg	1	1	0	0	0	0	0	1	0	7	20
Norfolk	1	0	0	0	0	5	2	0	0	2	-------
Richmond	1	1	0	0	0	4	2	2	0	3	47
Roanoke	0	1	0	0	0	2	2	0	0	0	17
West Virginia											
Charleston	0	0	1	0	0	1	1	0	1	5	28
Huntington	0	1	1	0	0	2	1	0	0	0	16
Wheeling	1	1	0	0	0	0	0	1	0	1	11
North Carolina											
Raleigh	0	0	0	0	0	2	1	1	0	15	10
Wilmington	0	0	0	0	0	0	1	0	0	0	7
Winston-Salem	0	2	1	0	0	1	3	0	0	-------	20
South Carolina											
Charleston	0	0	0	0	0	1	2	2	0	4	22
Columbia	0	0	0	0	0	0	1	9	0	0	-------
Greenville	0	0	0	2	0	1	1	1	0	3	7
Georgia											
Atlanta	1	0	3	0	0	9	3	6	0	14	72
Brunswick	0	0	0	0	0	0	1	0	0	0	4
Savannah	0	0	0	0	0	3	2	0	0	0	30
Florida											
Miami	-------	1	-------	0	0	2	-------	1	1	7	31
St. Petersburg	0	-------	0	-------	0	0	0	-------	0	-------	8
Tampa	0	1	0	1	0	1	0	1	1	0	26
EAST SOUTH CENTRAL											
Kentucky:											
Covington	0	0	0	0	0	2	0	0	0	0	16
Louisville	1	5	0	0	0	11	4	2	0	1	86
Tennessee											
Memphis	0	2	1	0	0	11	4	13	2	4	75
Nashville	0	0	1	0	0	6	6	8	0	20	65
Alabama											
Birmingham	1	2	1	1	0	4	4	9	0	17	59
Mobile	0	0	1	0	0	1	0	0	0	0	19
Montgomery	0	1	0	0	0	0	1	0	0	3	23

City reports for week ended July 17, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	0	0			2	0		9	
Little Rock	0	3	1	0	0	5	2	2	1	0	
Louisiana											
New Orleans	1	3	0	0	0	15	5	4	0	9	143
Shreveport	0	0	0	1	0	0	2	0	0	0	23
Oklahoma											
Oklahoma City	1	0	1	0	0	0	2	3	0	0	21
Texas											
Dallas	1	3	0	0	0	2	3	3	2	21	52
Galveston	0	0	0	1	0	2	0	0	0	0	15
Houston	1	0	1	1	0	7	2	3	1	0	60
San Antonio	1	3	0	0	0	12	1	1	1	0	56
MOUNTAIN											
Montana:											
Billings	1	1	0	0	0	0	0	0	0	1	6
Great Falls	0	0	0	1	0	1	1	0	0	6	14
Helena	0	0	0	0	0	0	0	0	0	0	1
Missoula	0	0	1	0	0	0	0	0	0	0	4
Idaho											
Boise	1	1	1	0	0	0	0	0	0	0	3
Colorado											
Denver	5	6	2	0	0	10	1	0	0	23	59
Pueblo	0	0	0	0	0	0	0	0	0	0	5
New Mexico											
Albuquerque	0	0	0	0	0	8	0	0	0	4	25
Arizona											
Phoenix		0	0	0	0	8	0	0	0	0	20
Utah:											
Salt Lake City	2	2	1	0	0	1	1	0	0	32	28
Nevada											
Reno	0	0	0	0	0	0	0	0	0	0	3
PACIFIC											
Washington											
Seattle	4	9	3	0			1	1		8	
Spokane	1	4	3	0			1	0		12	
Tacoma	1	0	1	5	0	0	0	0	0	0	25
Oregon											
Portland	3	9	6	6	0	4	0	0	0	3	68
California											
Los Angeles	8	17	3	3	0	28	4	3	0	15	196
Sacramento	1	0	0	0	0	2	1	3	2	0	19
San Francisco	5	5	1	0	0	10	1	1	1	1	129

City reports for week ended July 17, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Vermont									
Barre	0	1	0	0	0	0	0	0	0
Massachusetts									
Boston	1	0	0	0	0	1	0	0	0
Fall River	0	0	0	0	0	0	0	1	0
Springfield	0	0	0	0	0	0	0	1	0
Worcester	0	0	0	0	1	0	1	2	0
Rhode Island									
Providence	0	0	0	1	0	0	0	0	0
Connecticut									
New Haven	0	1	0	0	0	0	0	0	0
MIDDLE ATLANTIC									
New York									
New York	0	2	4	3	0	0	4	3	0
Rochester	0	0	1	0	0	0	0	0	0
Syracuse	0	0	0	0	0	0	0	1	0
Pennsylvania									
Philadelphia	0	0	0	1	0	0	0	0	0
Pittsburgh	0	0	0	0	0	0	0	0	1
EAST NORTH CENTRAL									
Ohio									
Cleveland	0	0	0	1	0	0	1	0	0
Toledo	0	1	0	0	0	0	0	0	0
Illinois									
Chicago	1	1	2	0	0	0	1	2	0
Springfield	0	0	0	0	0	0	0	1	0
Michigan									
Detroit	1	0	3	0	0	0	1	0	0
Grand Rapids	1	0	0	0	0	0	0	0	0
Wisconsin									
Milwaukee	1	1	0	0	0	0	1	0	0
WEST NORTH CENTRAL									
Minnesota									
St Paul	0	0	0	0	0	0	0	1	0
Missouri									
St Louis	3	0	0	0	0	0	1	0	0
SOUTH ATLANTIC									
Maryland									
Baltimore	0	0	2	0	0	0	1	2	0
District of Columbia									
Washington	0	0	0	0	0	0	0	1	0
Virginia									
Roanoke	0	0	0	0	0	1	0	0	0
West Virginia									
Charleston	0	1	0	0	0	0	0	0	0
North Carolina									
Raleigh	0	1	0	0	0	0	0	0	0
Winston-Salem	0	0	0	0	0	0	0	0	1
South Carolina									
Charleston	0	0	0	0	2	1	0	1	0
EAST SOUTH CENTRAL									
Kentucky									
Louisville	0	0	0	1	0	1	0	0	0
Tennessee									
Nashville	0	0	0	0	0	2	0	0	0
Alabama									
Birmingham	0	0	1	1	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	0	0	0	0	1	0	0	0	0
Little Rock	0	0	1	0	0	3	0	0	0
Louisiana									
New Orleans	0	0	1	1	1	1	0	0	0

City reports for week ended July 17, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
WEST SOUTH CENTRAL—continued									
Oklahoma									
Oklahoma City	0	0	0	0	1	0	0	0	0
Texas									
Dallas	0	0	0	0	1	2	0	0	0
PACIFIC									
California									
Los Angeles	0	1	0	0	0	0	0	1	0
Sacramento	1	0	0	0	0	0	0	1	1
San Francisco	0	0	1	0	1	0	0	0	0

The following table gives the rates per 100,000 population for 103 cities for the five-week period ended July 17, 1926, compared with those for a like period ended July 18, 1925 The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available The 103 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, June 13 to July 17, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926
103 cities	114	[2] 113	112	[2] 131	[3] 92	[4] 122	93	[5] 99	76	[6] 94
New England	93	78	122	59	113	64	60	57	60	78
Middle Atlantic	166	124	163	152	95	163	126	120	96	101
East North Central	86	131	78	161	81	117	83	[7] 93	68	109
West North Central	129	[2] 167	111	[2] 195	127	[6] 125	90	[6] 93	82	[6] 107
South Atlantic	48	68	69	45	38	83	52	[8] 66	50	32
East South Central	5	16	32	10	5	[9] 22	21	5	11	21
West South Central	70	43	44	43	57	47	35	43	26	26
Mountain	185	146	102	118	176	155	102	118	120	109
Pacific	108	102	102	132	[3] 138	129	119	181	94	159

[1] The figures given in this table are rates per 100,000 population, annual basis—and not the number of cases reported Populations used are estimated as of July 1, 1925 and 1926, respectively
[2] Grand Forks, N Dak , not included.
[3] Spokane, Wash , not included
[4] Grand Forks, N Dak., Sioux Falls, S Dak , and Covington, Ky , not included
[5] Detroit, Mich., Grand Forks, N Dak , Sioux Falls, S Dak , and Frederick, Md , not included.
[6] Grand Forks, N. Dak , and Sioux Falls, S Dak., not included.
[7] Detroit, Mich , not included
[8] Frederick, Md., not included.
[9] Covington, Ky., not included.

Summary of weekly reports from cities, June 13 to July 17, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925— Continued

MEASLES CASE RATES

	Week ended—									
	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926
103 cities	416	[2] 734	292	[2] 617	[3] 225	[4] 435	186	[5] 315	153	[6] 215
New England	611	494	393	425	338	319	273	246	252	180
Middle Atlantic	542	585	380	476	257	313	248	211	198	129
East North Central	547	943	377	828	300	634	210	[7] 536	178	365
West North Central	84	[2] 1,260	58	[2] 935	30	[6] 604	34	[6] 417	28	[6] 191
South Atlantic	330	825	263	701	248	436	200	[8] 294	140	203
East South Central	105	695	121	612	80	[9] 430	110	285	74	171
West South Central	18	77	4	95	4	52	0	47	0	17
Mountain	74	701	92	792	37	437	55	264	28	191
Pacific	80	582	50	485	[3] 35	461	39	337	61	329

SCARLET FEVER CASE RATES

	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926
103 cities	159	[2] 233	113	[2] 212	[3] 95	[4] 170	87	[5] 122	58	[6] 93
New England	137	203	103	236	108	187	141	158	77	99
Middle Atlantic	144	221	99	210	79	188	81	129	45	73
East North Central	202	340	146	253	114	187	91	[7] 125	63	118
West North Central	317	[2] 480	179	[2] 351	163	[6] 270	139	[6] 205	104	[6] 185
South Atlantic	58	131	42	152	56	66	42	[8] 64	44	45
East South Central	147	47	84	47	68	[9] 66	116	52	74	52
West South Central	35	69	53	30	44	60	9	34	22	52
Mountain	139	127	203	118	102	91	148	55	83	91
Pacific	110	216	102	159	[3] 67	151	50	121	58	94

SMALLPOX CASE RATES

	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926
103 cities	35	[2] 11	24	[2] 16	[3] 14	[4] 11	16	[5] 8	14	[6] 7
New England	0	0	0	0	0	0	2	0	2	0
Middle Atlantic	1	0	0	0	1	2	0	0	1	1
East North Central	42	10	19	14	13	10	11	[7] 9	9	6
West North Central	58	[2] 32	36	[2] 44	16	[6] 26	20	[6] 28	16	[6] 26
South Atlantic	29	30	13	26	10	11	23	[8] 9	8	6
East South Central	184	10	121	88	58	[9] 39	74	0	42	5
West South Central	18	26	0	17	4	22	4	4	13	13
Mountain	18	27	28	18	28	55	18	9	18	9
Pacific	146	24	163	32	[3] 85	19	97	24	113	22

TYPHOID FEVER CASE RATES

	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926
103 cities	21	[2] 11	25	[2] 12	[3] 35	[4] 17	33	[5] 14	36	[6] 22
New England	19	19	17	9	22	12	24	9	31	12
Middle Atlantic	14	9	18	10	15	11	17	7	25	11
East North Central	6	4	8	4	10	5	13	[7] 4	11	5
West North Central	12	[2] 10	10	[2] 4	20	[6] 10	42	[6] 16	42	[6] 14
South Atlantic	46	28	67	30	65	36	56	[8] 43	52	58
East South Central	74	21	84	36	184	[9] 127	163	52	205	166
West South Central	123	30	128	30	233	13	159	30	128	56
Mountain	37	0	0	0	9	27	28	0	18	0
Pacific	6	8	19	16	[3] 21	22	17	13	30	22

[2] Grand Forks, N Dak, not included
[3] Spokane Wash, not included
[4] Grand Forks, N, Dak, Sioux Falls, S Dak, and Covington, Ky, not included
[5] Detroit, Mich, Grand Forks, N Dak, Sioux Falls, S Dak, and Frederick, Md, not included.
[6] Grand Forks, N Dak, and Sioux Falls, S Dak, not included.
[7] Detroit, Mich, not included
[8] Frederick, Md, not included
[9] Covington, Ky, not included.

*Summary of weekly reports from cities, June 13 to July 17, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925—*Continued

INFLUENZA DEATH RATES

	Week ended—									
	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 1, 1925	July 17, 1926
96 cities	6	7	6	5	4	[10] 6	2	[11] 4	2	[12] 4
New England	2	9	7	0	2	5	0	7	0	0
Middle Atlantic	4	0	6	6	2	7	2	1	2	4
East North Central	7	3	6	3	5	5	2	[7] 8	3	4
West North Central	6	4	4	6	0	[12] 8	0	[12] 0	0	[12] 0
South Atlantic	6	4	2	6	6	8	0	[8] 0	4	6
East South Central	32	16	16	5	11	[9] 0	16	16	0	21
West South Central	10	24	10	24	10	14	10	5	10	9
Mountain	0	0	9	0	0	9	0	0	0	9
Pacific	4	4	4	0	4	4	0	4	1	4

PNEUMONIA DEATH RATES

	June 20, 1925	June 19, 1926	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 1, 1925	July 17, 1926
96 cities	73	87	65	74	56	[10] 75	50	[11] 67	51	[12] 60
New England	60	87	58	59	46	92	43	71	48	57
Middle Atlantic	93	95	75	83	61	90	64	73	63	71
East North Central	76	74	45	61	42	61	55	[7] 67	41	46
West North Central	52	75	51	41	40	[12] 38	38	[12] 53	53	[12] 36
South Atlantic	75	111	90	91	71	88	65	[8] 72	48	54
East South Central	95	99	110	125	89	[9] 121	84	119	63	109
West South Central	87	71	73	78	58	57	58	57	73	85
Mountain	139	100	55	109	65	46	74	36	83	36
Pacific	35	75	17	43	73	43	65	53	40	46

[7] Detroit, Mich., not included
[8] Frederick, Md., not included
[9] Covington, Ky., not included
[10] Sioux Falls, S. Dak., and Covington, Ky., not included
[11] Detroit, Mich., Sioux Falls, S. Dak., and Frederick, Md., not included
[12] Sioux Falls, S. Dak., not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	103	96	29, 944, 996	30, 473, 129	29, 251, 658	29, 761, 201
New England	12	12	2, 176, 124	2, 206, 124	2, 176, 124	2, 206, 124
Middle Atlantic	10	10	10, 346, 970	10, 476, 970	10, 346, 970	10, 476, 970
East North Central	16	16	7, 481, 656	7, 655, 436	7, 481, 656	7, 655, 436
West North Central	14	11	2, 594, 962	2, 634, 602	2, 461, 380	2, 499, 036
South Atlantic	21	21	2, 716, 070	2, 776, 070	2, 716, 070	2, 776, 070
East South Central	7	7	993, 103	1, 004, 953	993, 103	1, 004, 953
West South Central	8	6	1, 184, 057	1, 212, 057	1, 078, 198	1, 103, 695
Mountain	9	9	563, 912	572, 773	563, 912	572, 773
Pacific	6	4	1, 888, 142	1, 934, 084	1, 434, 245	1, 469, 144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended July 3, 1926.—The following report for the week ended July 3, 1926, was transmitted by the Far Eastern Bureau of the Health Section of the League of Nations' Secretariat, located at Singapore, to the headquarters at Geneva

Maritime towns	Plague		Cholera		Small-pox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt						
Suez	1	0	0	0	0	0
Iraq						
Basra	0	0	0	0	2	2
British India						
Calcutta	----	0	----	45	5	5
Bombay	----	0	----	0	12	8
Madras	----	0	----	0	2	0
Rangoon	----	3	----	6	0	0
Negapatam	----	0	----	7	0	0
Karachi	----	1	----	0	3	2
Vizagapatam	----	0	----	0	5	0
Dutch East Indies						
Surabaya	0	0	0	0	2	1
Siam						
Bangkok	0	0	36	14	13	3
French Indo-China						
Saigon and Cholon	0	0	32	19	0	0
Haiphong	0	0	17	15	0	0
China						
Amoy	8	----	0	1	1	0
Hongkong	0	0	0	0	1	1
Shanghai	0	0	1	0	----	1
Japan						
Osaka	0	0	0	0	2	[illegible]
Kwantung						
Port Arthur	0	0	0	0	1	0
Dairen	0	0	0	0	2	0
U S S R						
Vladivostok	0	0	0	0	2	0

The telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

British India.—Chittagong, Cochin, Tuticorin

Ceylon.—Colombo

Federated Malay States.—Port Swettenham

Straits Settlements.—Penang-Singapore

Dutch East Indies.—Batavia, Samarang, Cheribon, Belawan, Deli Palembang, Sabang, Makassar, Menado, Banjermasin, Balik-Papan, Tarakan, Pontianak

Sarawak.—Kuching

British North Borneo.—Sandakan

Portuguese Timor.—Dilly.

Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga

French Indo-China.—Turane.

Formosa.—Keelung.

Japan.—Nagasaki, Yokohama, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki.

Korea.—Chemulpo, Fusan

Manchuria.—Antung, Mukden, Changchun, Harbin

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended August 6, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Bolivia:				
La Paz	June 1-30	6	2	
Canada				
Ontario—				
Ottawa	July 18-24	1		
China				
Amoy	June 13-19	1		
Chungking	do			Present
Foochow	June 13-26			Do
Hongkong	June 6-12	2	1	
Manchuria—				
Changchun	June 20-26	1		So Manchuria R R
Dairen	May 31-June 20	15	8	
Kai-yuan	June 20-26	3		Do
Shanghai	do	1	1	Cases, foreign, deaths, foreign and Chinese
Swatow	do			Present.
Guatemala				
Guatemala City	June 1-30		2	
India				
Karachi	June 13-19	7	3	
Japan				
Taiwan Island	June 11-20	15		
Java				
East Java and Madoera	May 23-29	13	1	
Mexico				
Guadalajara	July 13-19		2	
San Luis Potosi	July 11-17		4	
Union of South Africa				
Natal	May 30-June 5			Outbreak.
Transvaal	June 6-12			Outbreaks in Pietersburg and Rustenburg Districts
Johannesburg	do	1		

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Bolivia				
La Paz	June 1-30		1	
Chile				
Antofagasta	June 20-26	1		
Do	June 27-July 3	1		
China				
Antung	June 14-27	7	1	
Do	June 28-July 4	4		
Egypt				
Port Said	June 11-24	3	1	
Tunisia				
Tunis	June 21-30	1		
Union of South Africa				May, 1926 Cases, 66; deaths, 5 (colored) cases, European, 2.
Cape Province				May, 1926. Cases, 45, deaths, 4 (colored)
Do	May 31-June 12			Outbreaks.
Natal				May, 1926 Cases, 13 (colored).
Do	June 6-12			Outbreaks
Orange Free State				May, 1926. Cases, 8, deaths, 1.
Do	June 6-12			Outbreaks

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil				
Bahia	June 6-19	4	3	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 30, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 1, 1926 Cases, 30; deaths, 24
China:				
Shanghai	Reported July 20	35	8	
French Settlements in India				Mar 7-Apr 10, 1926. Cases, 13; deaths, 13
India				Apr 25-May 29, 1926: Cases, 12,568, deaths, 7,642.
Bombay	May 30-June 5	1	1	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-19	46	41	
Madras	May 16-June 5	2	1	
Rangoon	May 9-June 5	23	16	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 5	22	21	
Philippine Islands				
Manila	May 18-24	2	2	
Provinces—				
Albay	Apr 18-24	1	1	
Mindoro	Feb 21-27	1	1	
Romblon	Dec 14-31	42	43	
Siam				
Bangkok	May 2-June 5	1,209	686	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Azores				
St Michaels—				
Arrifes	May 9-15	1		
Livramente	May 15-29	2	1	
British East Africa				
Kisumu	May 16-22	1	1	
Uganda	Mar 1-31	35	34	
Ceylon				
Colombo	May 29-June 5	1	1	
China				
Amoy	Apr 18-May 29		30	Quite prevalent
Do	May 30-June 12	19		Deaths not reported.
Foochow	June 6-12			Several cases Not epidemic.
Nanking	May 9-June 5			Prevalent
Ecuador				
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Egypt				Jan 1-June 10, 1926 Cases, 56.
City—				
Suez	May 21-June 3	4	3	
Province—				
Beni-Suef	May 28-June 8	8	2	
Gharbieh	June 2	1	1	
Greece				
Athens	Apr 1-30	7	2	Including Piraeus.
Do	May 1-31	9	2	Do.
Patras	May 27-June 12	4	1	
Zante	May 17	1		
India				Apr 25-May 29, 1926 Cases, 44,974, deaths, 34,840
Bombay	May 2-June 5	13	13	
Karachi	May 23-June 19	11	10	
Madras Presidency	Apr 25-May 29	69	50	
Rangoon	May 9-June 5	7	5	
Indo-China				
Saigon	May 23-June 5	3	1	
Iraq				
Bagdad	Apr 18-May 15	107	61	
Do	May 30-June 12	36	23	
Japan				
Yokohama	Reported July 6		3	
Java				
Batavia	Apr 24-June 4	57	57	
Cheribon	Apr 11-24	3	3	
Madagascar				Apr. 1-15, 1926 Cases, 42; deaths, 39
Moramanga Province	Apr. 1-15	2	2	Septicemic
Tananarive Province				Apr. 1-30, 1926. Cases, 70; deaths, 67
Tananarive Town	Apr 1-30	5	5	
Other localities	do	65	62	Bubonic, pneumonic, septicemic.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 30, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Nigeria				Feb 1-Mar 31, 1926 Cases, 81; deaths, 62
Peru				May, 1926 Cases, 23, deaths, 10.
Departments—				
Ancash	May 1-31			Present.
Cajamarca	do			Do
Ica	do	1		
Libertad	do	4		Pacasmayo, cases, 2, Trujillo district, cases, 2
Lima	do	18	10	Lima City, 1 case, country estates, 1
Russia				Jan 19-Feb 25, 1926 Cases, 7
Senegal				Nov 1-30, 1926 Cases, 3, deaths, 2
Siam				
Bangkok	May 23-29	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Tunisia				
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Union of South Africa				
Cape Province	May 16-22	5	3	
Orange Free State—				
Hoopstad District—				
Protestpan	May 9-22	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria.				
Algiers	May 21-June 20	11		
Bolivia				
La Paz	May 1-31	8	5	
Brazil				
Manaos	Apr 1-30		5	
Para	May 16-June 19	20	21	
Rio de Janeiro	May 2-June 5	102	55	
Do	June 6-12		17	
Santos	Mar 1-7		1	
British East Africa				
Tanganyika	May 2-22		12	
Uganda	Mar. 1-31	1		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Canada				May 30-June 12, 1926 Cases, 46.
Alberta	May 30-June 12	3		
Manitoba	May 30-June 26	24		
Winnipeg	June 6-12	5	1	
Do	July 4-17	6		
Ontario				May 30-June 26, 1926 Cases, 36.
Kingston	May 23-June 26	5		
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Orillia	Apr 26-May 29	7		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
Saskatchewan				May 30-June 19, 1926: Cases, 16.
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-29		8	
Do	May 30-June 12	3		
Chungking	May 2-June 12			Present.
Foochow	May 9-29			Do.
Hongkong	May 2-June 5	14	8	
Manchuria—				
An-Shan	May 16-June 12	9		South Manchuria Railway.
Antung	May 16-June 19			
Changchun	May 16-June 19	6		Do
Dairen	Apr 26-May 9	31	6	
Fushun	do	3		Do
Harbin	May 14-June 12	16		Do
Kai-yuan	May 16-June 19	4		Do
Kungchuling	June 13-19	1		Do
Liao-yang	May 16-June 19	3		Do
Mukden	May 16-June 12	2		Do
Penhsihu	May 16-June 19	4		Do
Supingkai	do	1		Do
Tashihchiao	do	2		Do.
Wa-feng-tien	do	3		Do.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 30, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Nanking	May 8-June 5			Present
Shanghai	May 2-29	9	24	Cases Foreign Deaths, population of international concession, foreign and native
Swatow	May 9-June 5			Sporadic
Wanshein	May 1			Present among troops
Chosen				
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-June 10	12	2	
Esthonia				May 1-31, 1926 Cases, 1
France				Mar 1-31, 1926 Cases, 68
St Etienne	June 9-15	2		
French settlements in India	Mar 7-Apr 10	127	127	
Great Britain				
England—				
Bradford	May 23-29	1		
Newcastle-on-Tyne	June 6-12	1		
Nottingham	May 2-June 5	7		
Sheffield	June 13-19	1		
India				Apr 25-May 29, 1926, Cases, 34,957, deaths, 9,035
Bombay	May 2-29	114	63	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-19	8	7	
Karachi	May 16-June 12	36	14	
Madras	May 16-June 19	6	4	
Rangoon	May 9-June 5	7	3	
Indo-China				
Saigon	May 9-15	1		
Iraq				
Bagdad	May 9-June 5	4		
Basra	Apr 18-June 5	30	21	
Italy				Mar 28-Apr 17, 1926 Cases, 10
Jamaica				May 30-June 26, 1926 Cases, 99. (Reported as alastrim)
Japan				
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Taiwan Island	May 11-20	24		
Do	June 1-10	8		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-21	1		Province
East Java and Madoera	Apr 11-May 15	26	2	Interior
Malang	Apr 4-10	6	1	
Surabaya	May 16-22	14	1	
Latvia				Apr 1-30, 1926 Cases, 3.
Mexico				
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-July 5		1	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
San Antonio de Arenales	Jan. 1-June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-10		1	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Nigeria				Feb 1-Mar 31, 1926 Cases, 270, deaths, 12
Poland				Mar. 28-May, 1926 Cases, 12, deaths, 1
Portugal:				
Lisbon	Apr 26-June 19	10	3	
Oporto	May 23-June 5	4		
Russia				Jan 1-31, 1926 Cases, 492
Siam				
Bangkok	May 2-June 5	19	16	
Straits Settlements				
Singapore	Apr 25-May 1	1		
Tunisia				Apr 1-May 10, 1926 Cases, 6.
Union of South Africa:				
Cape Province—				
Idutywa District	May 23-29			Outbreaks
Transvaal—				
Johannesburg	May 9-June 5	4		
On vessels				Three cases, 1 death, at Aden, Arabia, stated to have been imported by sea.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to July 30, 1926—Continued

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	May 21-June 20	6	1	
Chile				
Antofagasta	May 23-29	3		
Valparaiso	Apr 29-May 5		1	
China				
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen	Feb 1-28	228	18	
Chemulpo	May 1-31	28	1	
Egypt				
Port Said	June 4-10	1		
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30-June 5	1		
Cork	June 5	1		
Kerry County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-Apr 17, 1926 Cases, 2
Japan				Mar 28-Apr 10, 1926 Cases, 15.
Lithuania				Mar 1-31, 1926 Cases, 38, deaths, 5
Mexico				
Mexico City	May 16-June 5	20		Including municipalities in Federal District.
Do	June 13-19	9		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-31, 1926 Cases, 140
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces.
Jaffa District	June 15-28	5		
Peru.				
Arequipa	Jan 1-31		2	
Poland				Mar 28-May 15, 1926 Cases, 781; deaths, 60
Rumania				Mar 1-31, 1926 Cases, 41
Russia				Jan 1-31, 1926 Cases, 2,956
Tunisia				Apr 1-May 10, 1926 Cases, 64.
Union of South Africa				April 1926 Cases, 85, deaths, 14 (colored), European, 2 cases Total, 87 cases, 14 deaths.
Cape Province				Apr 1-30, 1926: Cases, 71, deaths, 11 Native.
Do	May 9-15			Outbreaks
Grahamstown	do	1		Sporadic
Natal				Apr 1-30, 1926: Cases, 4 Native
Orange Free State				Apr 1-30, 1926 Cases, 7. Native
Transvaal				Apr. 1-30, 1926. Cases, 3, deaths, 3. Native.
Yugoslavia:				
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-29	4	3	

TREASURY DEPARTMENT

PUBLIC HEALTH REPORTS

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1926

CHOLERA, PLAGUF

Reports Rec

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen B J LLOYD, *Chief of Division*

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// PUBLIC HEALTH REPORTS

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INCIDENCE OF ENDEMIC THYROID ENLARGEMENT IN CONNECTICUT

By ROBERT OLESEN, Surgeon, and NEIL E TAYLOR, Acting Assistant Surgeon, United States Public Health Service

INTRODUCTION

There is a widespread impression among professional as well as lay observers that endemic thyroid enlargement is relatively infrequent in Connecticut. This impression has been strengthened since the enunciation of the iodine deficiency theory of simple goiter causation. Connecticut lies wholly within the glaciated area and therefore a slight reduction in soil iodine may be expected. However, because of the proximity of the State to the seaboard and the excellence of the transportation facilities, by means of which iodine-containing foods are made available, it is improbable that there is a serious absolute deficiency of iodine. Consequently there is ample reason for assuming that endemic thyroid enlargement is comparatively infrequent in that State.

The principal information concerning goiter in Connecticut, and certainly that most widely quoted, was derived from the physical examinations of men drafted for military service during the World War.[1] In comparison with other States, Connecticut had relatively few instances either of simple or of exophthalmic goiter among the drafted men. However, it should be pointed out that the findings were based upon the recognition of 55 cases of exophthalmic goiter and 32 cases of simple goiter by a considerable number of examining physicians with varying degrees of skill and experience in diagnosis.

In view of the uncertainty as to the extent and distribution of endemic thyroid enlargement in Connecticut, the Public Health Service was requested by the State commissioner of health to undertake a thyroid survey. Consequently an investigation was made by the writers in the fall of 1925

1. HOW THE SURVEY WAS MADE

In cooperation with the Connecticut State Department of Health, to the officials of which the writers are greatly indebted for numerous courtesies and efficient cooperation, 28 representative communities

[1] Love, A G, and Davenport, C B Defects Found in Drafted Men Prepared under the direction of the Surgeon General, M W Ireland, War Department, Washington, D C Government Printing Office, 1920

were visited[2] In selecting these localities, indicated on Map 1, an effort was made to include the principal centers of population and different sections of the State If endemic thyroid enlargement should be more prevalent in one portion of the State than another it could be detected in such a State-wide survey.

Methods.—The thyroid examinations in Connecticut were limited to boys and girls in the high schools and upper grades of the grammar schools of the places visited In this way children of adolescent age, in whom endemic goiter may reasonably be expected to be present, were included in the investigation. The methods employed in making the examinations and the standards used in classifying the enlargements were identical with those applied in the Cincinnati and Colorado surveys.[3,4] Consequently the results are comparable

Scope of the survey.—In the 28 localities visited, the thyroids of 5,797 boys and 6,608 girls were examined. At the same time the condition of the tonsils and teeth were inspected for the purpose of determining a possible relationship between potential foci of infection and thyroid enlargement. The results of this latter study will be made the subject of a separate report. The method of supplementing a routine thyroid examination by collateral studies which may enhance our knowledge on the subject of goiter causation is recommended for more extended application Such collateral investigations require relatively little additional time and are usually enlightening.

2 THE RESULTS

In Table 1 are displayed the numbers, degrees, and percentages of thyroid enlargements occurring among 5,797 boys and 6,608 girls in the 28 localities studied. Among the boys there were 402 enlargements of all sizes, a percentage of 7. A greater number of enlargements, 1,945, or 29.4 per cent, were found among the girls.

The disproportion of thyroid enlargements between boys and girls included in the Connecticut survey is particularly noteworthy. Ordinarily endemic goiter is between two and one-half to six times more frequent among girls. For instance, the ratio of goiter prevalence among girls and boys in the Cincinnati survey was as 6 to 4, approximately 50 per cent of very slight thickenings being included in the estimate. In the Connecticut survey the proportion was 4.2 to 1.

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[2] The writers are also under many obligations to the health officers, school physicians, school nurses, superintendents of schools, and teachers for assistance in making the examinations possible in the localities visited

[3] Olesen, Robert Thyroid Survey of 47,493 Elementary School Children in Cincinnati. Public Health Reports, vol 39, No 30, p 1778, July 25, 1924 (Reprint No 941)

[4] Olesen, Robert Endemic Goiter in Colorado Public Health Reports, vol. 40, No. 1, Jan. 2, 1925, pp 1-22 (Reprint No. 983.)

Marine [5] points out that the proportional incidence of goiter among the boys and girls of a given community may be used as an indicator in estimating the severity of the malady. Thus, in districts in which goiter is most severe in its manifestations, 100 per cent of both sexes have thyroid enlargement From this peak the condition gradually decreases in severity until the proportion becomes 10 to 1 in districts with sporadic occurrence of goiter.

Coming to a consideration of the degrees of thyroid enlargement among the boys it will be noted that there were 366 very slight and 35 slight enlargements, and only 1 moderate enlargement, percentages of 6 3, 0 6, and 0 017, respectively. Among the girls there were 1,428, or 21.6 per cent, very slight, and 426, or 6 4 per cent slight thyroid thickenings There were also 83, or 1.2 per cent, moderate, 6 marked, and 2 very marked thyroid involvements

Further differences between goiter prevalence in Cincinnati and Connecticut are apparent when degrees of enlargement are compared. In Cincinnati very slight enlargements prevail to about the same extent among girls and boys. Slight enlargements were twice as frequent among the girls Moderate thickenings were four times, marked thickenings six times, and very marked thickenings seven times more frequent among the Cincinnati girls.

An entirely different picture is presented when similar comparisons are made between goiter prevalence among girls and boys in Connecticut. Very slight involvements in Connecticut were four times and slight involvements twelve times more frequent among the girls. There were 91 moderate, marked, and very marked goiters among the girls and only 1 moderate goiter among the Connecticut boys It is evident from these comparisons that thyroid enlargement is proportionately and actually less frequent in Connecticut than in certain other sections of the country.

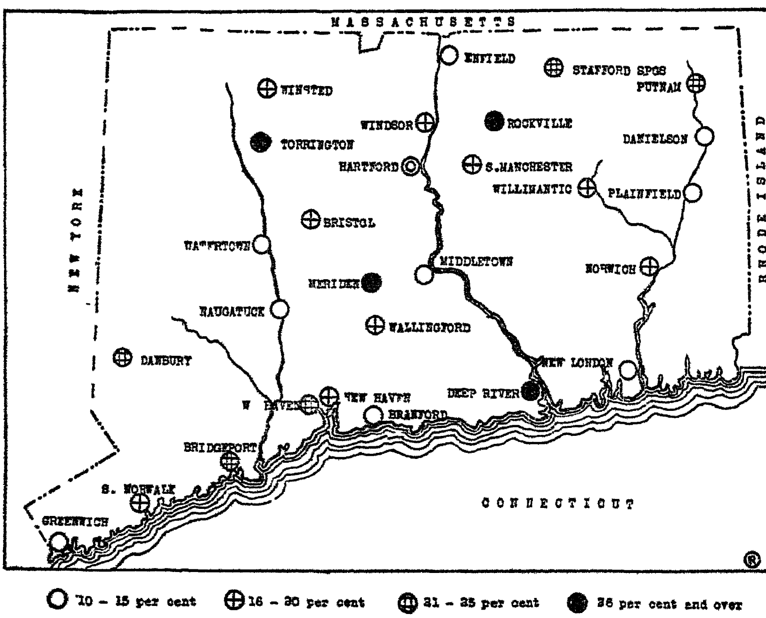
In addition to revealing the anticipated preponderance of thyroid enlargement among the girls the survey brought out other points of interest. Among the boys the enlargements were almost entirely of the very slight and slight varieties. Moreover, instead of the firm, tubelike, isthmial involvements so commonly encountered among boys in Cincinnati, the enlargements in Connecticut were more frequently of a diffused character Among the 98 boys examined in Plainfield there was no evidence of thyroid enlargement Other localities in which little involvement of the thyroid gland was detected among the boys were Naugatuck, Danielson, South Norwalk, and Watertown. Places with considerable thyroid involvement of slight degree among the boys were Meriden, Deep River, Middletown, and Willimantic.

[5] Dr David Marine, consultant in goiter studies, United States Public Health Service (Personal communication)

Among the girls, enlarged thyroids were noted most frequently in Torrington, Rockville, Deep River, and Meriden. The condition was least frequent among the girls in Hartford.

These variations are cited in order to indicate the irregularity of distribution of enlarged thyroids in the State Apparently geographical location, in so far as thyroid enlargement in this State is concerned, has little significance Localities along Long Island Sound, where thyroid enlargement should, theoretically at least, be comparatively infrequent, appear to have as much of the affection as do some of the places inland

Table 2 has been prepared for the purpose of showing the prevalence of thyroid enlargement in each sex separately, and both sexes



MAP 1—Showing percentage distribution of thyroid enlargement as disclosed by a survey of 5,797 boys and 6,608 girls in 28 localities in Connecticut

combined, in each of the 28 localities surveyed. This material is displayed graphically in Map 1 by means of symbols which denote varying percentages of prevalence. A total of 2,347 enlargements of all sizes, 18.9 per cent, were found among the 12,405 children examined. The least percentage of enlargement was found in Danielson, with 9.7 per cent, and the greatest percentage in Meriden, with 33.8 per cent. Between these extremes the percentages show no decided groupings or tendencies. In fact there is no single large section of the State in which endemic thyroid enlargement appears to be more prevalent than in another.

In Table 3 the numbers and degrees of thyroid enlargement are shown at each age period between 10 and 18 years. The tendency

for thyroid involvement to decrease as the ages of the boys increase is again well illustrated in this tabulation. Among the girls, on the other hand, endemic thyroid enlargement increases in frequency with succeeding age periods until the seventeenth year. These trends are graphically illustrated in Chart 1.

Comparison of data for Minnesota, Cincinnati, and Connecticut.—By comparing the results of the thyroid survey in Connecticut with similar data secured in other sections of the country a conception of the relative prevalence is possible. In a previous publication [6] it was possible to make such a comparison between the thyroid surveys in Minnesota and the city of Cincinnati Thus, among the children examined in 13 localities in Minnesota, 58 per cent had some degree of thyroid enlargement, in contrast to 33 per cent in Cincinnati. The frequency rate for girls in Minnesota was 71 per cent as compared with 40 per cent in Cincinnati Among the boys in Minnesota there were 41 per cent of enlargements while among the boys in Cincinnati there were 27 per cent of enlargements. In contrast to these figures the much lower rates of thyroid incidence in Connecticut may be cited, 7 per cent among the boys and 29 4 per cent among the girls The relative prevalence of thyroid enlargement among the boys and girls in Minnesota, Cincinnati, and Connecticut is clearly shown in Chart 1.

The age incidence of thyroid enlargements seems to be similar in all essential respects in the three sections of the country, though the rates are highest in Minnesota and lowest in Connecticut. The curve representing the combined moderate and marked enlargements of the Connecticut girls rises only slightly from the zero line, while the curve representing this data for the boys does not rise enough to be shown on this chart.

Asymmetry.—In the Cincinnati survey 7 9 per cent of the thyroid enlargements were found to be asymmetrical, the right-lobed thickenings being nine times more frequent than left-lobed involvements In the Connecticut survey, on the other hand, it was noted that asymmetry not only was less frequent but that left-lobed enlargements occurred just as frequently as did those involving the right lobe.

Relation of endemic goiter to drinking water.—The rôle played by drinking water in the causation of endemic goiter has been a subject for study and conjecture for many years. Various theories have been advanced for the purpose of proving that endemic thyroid enlargement is caused by one or another substance inherent to or lacking in the water consumed by a given population. Thus, the heavy impregnation of drinking water with lime salts, the presence

[6] Thyroid Enlargement Among Minnesota School Children By Robert Olesen and Taliaferro Clark. Public Health Reports, vol. 39, No 41, Oct 10, 1924, pp 2561-2572. (Reprint No 963)

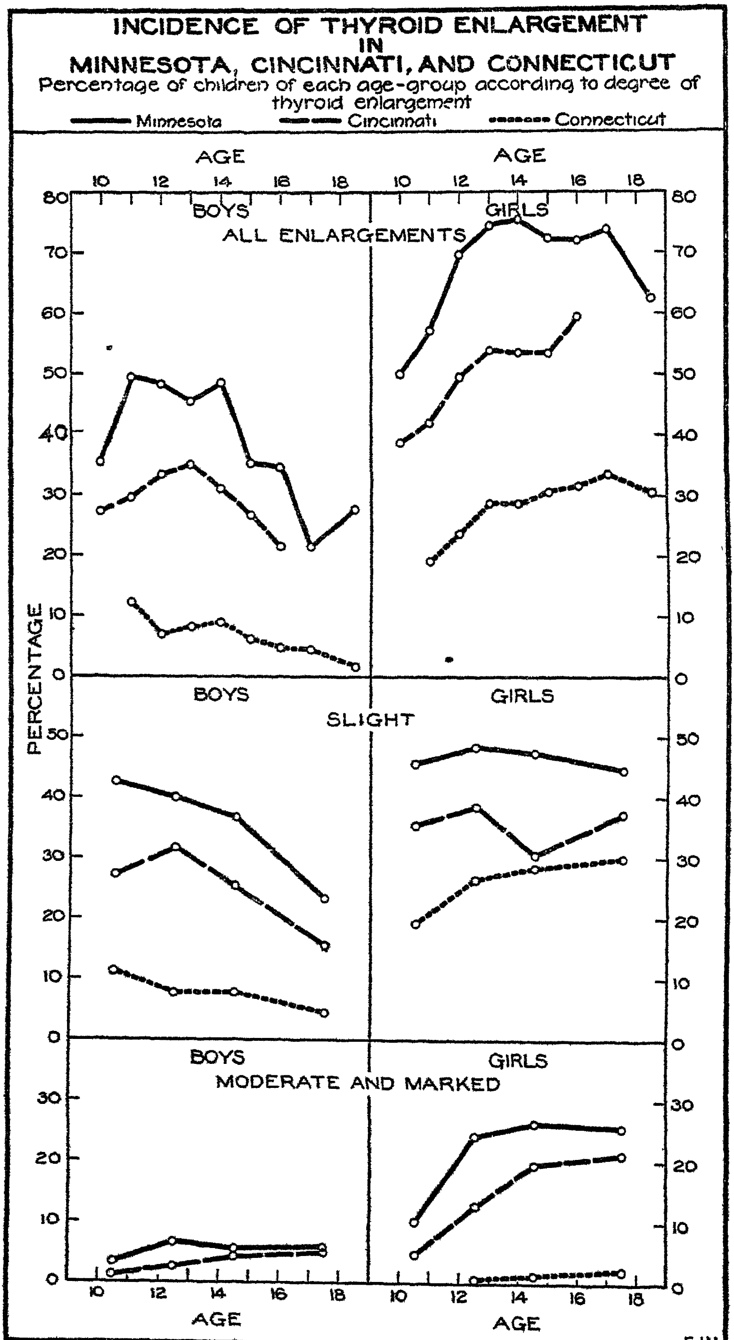
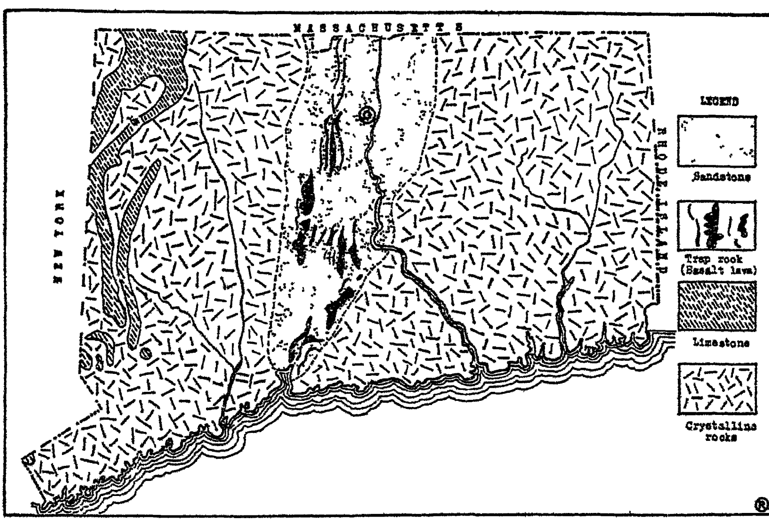

INCIDENCE OF THYROID ENLARGEMENT
IN
MINNESOTA, CINCINNATI, AND CONNECTICUT
Percentage of children of each age-group according to degree of thyroid enlargement
Minnesota
Cincinnati
Connecticut
AGE
10 12 14 16 18
BOYS
GIRLS
ALL ENLARGEMENTS
SLIGHT
MODERATE AND MARKED
PERCENTAGE
0 10 20 30 40 50 60 70 80
AGE
FJM

CHART 1

of unidentified microorganisms, the deficiency of iodine, and the absence of certain essential mineral salts have each been alleged to play a prominent part in goiter causation.

More recently the somewhat disturbing theory has been advanced that endemic goiter is due to the chlorination of drinking water. Moreover, the apparent increase in the amount of endemic thyroid enlargement has been ascribed to the increased use of chlorine in disinfecting water supplies

It has also been held that chlorine, by its disinfecting action upon water and the consequent destruction of microorganisms, is an active agent in preventing goiter. It is not the purpose, in the present article, to discuss the merits or defects of the several theories bearing upon this subject. However, such information as was obtained during the Connecticut survey will be presented.



MAP 2—Showing geologic formations in Connecticut

Unfortunately a State-wide series of determinations of iodine in drinking water is not available in Connecticut. However, judging from the results obtained in neighboring States, the iodine content of Connecticut drinking waters probably fluctuates considerably in various localities.

Sources and treatment of Connecticut water supplies—In Table 4 the source of the supply, the treatment, and whether or not chlorination is employed in the water supply of each of the 28 localities visited in Connecticut have been set forth. It will be noted that practically all the water available in these places is obtained from surface reservoirs. With a few exceptions, the supplies of water are subjected to storage for varying periods prior to use.

Geologic formations in Connecticut.—In view of the fact that goiter has long been held to be associated with certain geologic formations as, for instance, limestone, it is of interest to consider briefly the geology of Connecticut. The principal geologic formations, as shown in Map 2, are sandstone, trap rock (basalt lava), limestone and crystalline rock. The State may be divided, for geologic purposes, into three principal sections, the eastern and western highlands and the central lowland. All of the eastern and most of the western highlands are underlaid with crystalline rocks. In the western portion of the State there are also deposits of limestone. The central lowland is underlaid with sandstone and irregular outcroppings of trap rock. However, comparison of geologic formations and distributions of thyroid enlargements, as revealed by the surveys, fails to indicate a correlation.

SUMMARY

1. The thyroid survey in Connecticut included 5,797 boys and 6,608 girls in 28 localities.
2. In all, there were 2,347 thyroid enlargements, a percentage of 18.9, among the 12,405 children examined.
3. According to degree of thyroid enlargement there were 366, or 6.3 per cent, very slight enlargements among the boys, and 1,428, or 21.4 per cent, among the girls. There were 35, or 0.6 per cent, slight and only 1 moderate enlargement among the boys, while among the girls there were 426, or 6.4 per cent, slight and 63, or 1.2 per cent, moderate involvements. There were also 6 marked and 2 very marked enlargements among the girls.
4. Among the boys the percentages of thyroid involvement decline as the higher age periods are reached Among the girls, on the other hand, the percentages of enlargement increase until the age of 17 is reached.
5. In so far as the present survey is concerned there appears to be no section of the State of Connecticut in which endemic thyroid enlargement is more prevalent than another. However, the affection is more frequently encountered in some localities than in others.
6. A comparison of thyroid enlargement in Minnesota, Cincinnati, and Connecticut shows that the last named has the least amount.
7. There appears to be no correlation, in so far as the present study discloses, between the prevalence of thyroid enlargement and the principal geologic formations in Connecticut.

COMMENT

Endemic thyroid enlargement prevails to a far less extent in Connecticut than in certain other sections of the United States. Consequently two questions naturally arise in this connection:

1. Is the thyroid situation in Connecticut sufficiently important to require attention?

2 If the endemic thyroid problem is sufficiently important to merit consideration what action should be taken?

How much of a problem is goiter in Connecticut?—So long as endemic thyroid enlargement does not show a greater distribution than it does at present it would appear inexpedient and illogical for health officers and physicians to devote an undue share of attention to this single and comparatively minor phase of the general public-health problem Under the present circumstances the best general policy would appear to be one of conservative watchfulness.

However, two years hence, surveys should be made to determine whether an increase in the prevalence of endemic thyroid enlargement has taken place in the localities included in the present study. If such an increase has taken place widespread prophylactic and remedial efforts may be required On the other hand, should the affection appear stationary, intensive activity on the part of the State department of health, local health officers, physicians, and school authorities would probably not be indicated.

What should be done?[7]—At present the thyroid situation in Connecticut resolves itself into a consideration primarily of prevention and treatment of thyroid enlargement among adolescent girls The institution of State-wide goiter prophylaxis through the use of iodized water supplies, iodized table salt, or wholesale distribution of tablets containing iodine is not yet indicated in Connecticut. It is believed, however, that prophylactic measures should be carried out among girls between the ages of 11 and 16 years, under the direction of local health authorities, guided and assisted by the State department of health and the local medical practitioners. The prophylactic methods chosen appear to be immaterial, provided skilled supervision, low dosage of iodine, regularity and economy of administration are available.

Too often it is possible to secure a considerable per capita appropriation for goiter prophylaxis when it is difficult to obtain financial recognition of major public health projects. Goiter prevention should, of course, have a relative value, being alloted such a portion of the available funds as its comparative importance merits

There also appears to be a definite field in Connecticut for goiter prevention during pregnancy, thereby affording protection both to

[7] Commenting upon the suggestions made to the commissioner of health for meeting the conditions revealed during the present thyroid survey in Connecticut, Dr David Marine (personal communication) says "I can agree with every statement that has been made, particularly that of strongly recommending against the use of general prophylaxis under public supervision" Regarding the same subject, Dr H S. Plummer, consultant in goiter studies, United States Public Health Service, says (in a personal communication) "I approve of the concentrative stand taken in advising the Connecticut health authorities I am of the opinion that more intensive programs for goiter prevention should at present be concentrated where the disease is more prevalent."

the prospective mother and to the child. This prophylactic endeavor obviously depends upon the guidance of the medical profession and an educated public opinion.

Inasmuch as a considerable number of thyroid enlargements were detected among the girls examined, it is regarded as advisable that these children be placed under appropriate treatment. It should be pointed out that proper treatment consists of accurate diagnosis by a physician of skill, experience, and judgment, and the administration of appropriate remedies in minute doses, as well as nominal but regular supervision.

Marine[8] emphasizes the necessity for making an accurate distinction between goiter due to absolute and relative iodine deficiency. The former, of course, depends largely upon the lack of iodine in soil and water, whereas the latter is due to such factors as abnormal food, various types of infection, puberty, and pregnancy. Thyroid enlargements resulting from relative insufficiency of iodine must be handled as individual cases by competent physicians

Safeguarding iodine prophylaxis and treatment —Iodine in the form of Lugol's solution (compound solution of iodine) has been advocated as a temporary therapeutic measure in the treatment of exophthalmic goiter, in order that a patient may be brought into a satisfactory condition for operation.[8] Since this procedure has been advised, Lugol's solution has been used in the treatment of thyroid affections in which such medication has plainly been contraindicated. Consequently there have been numerous untoward and even disastrous results, causing widespread but unjustifiable condemnation of iodine as an agent in the prevention or treatment of all forms of goiter.

In view of the recently reported ill effects following iodine prophylaxis and treatment, it behooves those engaged in antigoiter activities not only to prescribe iodine in appropriately minute quantities, but also to be certain that iodine actually is indicated. It is just as important to know when to withhold iodine as when to administer it. Therefore, unless skilled treatment is available, it had best be withheld. Obviously, skillful treatment of thyroid conditions falls within the province of the especially qualified rather than the general medical practitioner.

[8] Regarding the use of iodine, Plummer says (personal communication). "The danger of giving iodine to adult patients having adenomatous goiter should be stressed. We have no reason to think that Lugol's solution is ever detrimental in cases having exophthalmic goiter Lugol's solution always benefits patients when that part of the complex which characterizes the disease is present, namely, the peculiar nervous phenomena and the stare "

TABLE 1.—*Numbers, degrees, and percentages of thyroid enlargements among 5,797 boys and 6,608 girls in 28 localities in Connecticut*

Place	Boys							Girls								
	With thyroid enlargement					Normal	Total	With thyroid enlargement							Normal	Total
	Degree of enlargement			Total	Per cent			Degree of enlargement					Total	Per cent		
	Very slight	Slight	Moderate					Very slight	Slight	Moderate	Marked	Very marked				
Branford	11	1	----	12	5.9	190	202	30	8	1	----	----	39	18.9	168	207
Bridgeport	3	----	----	3	3.0	95	98	122	20	3	1	----	146	29.8	345	491
Bristol	11	----	----	11	6.1	170	181	63	19	2	----	----	84	30.0	192	276
Danbury	3	----	----	3	5.4	53	56	17	11	2	----	----	30	35.3	55	85
Danielson	2	----	----	2	1.7	110	112	20	6	----	----	----	26	20.5	101	127
Deep River	23	4	----	27	19.9	109	136	39	13	7	----	----	59	42.4	80	139
Enfield	8	1	----	9	2.9	297	306	64	10	5	1	----	80	24.5	246	326
Greenwich	11	----	----	11	4.7	222	233	50	16	5	----	----	71	24.8	215	286
Hartford	37	4	----	41	7.8	484	525	54	14	----	----	----	68	15.5	372	440
Meriden	41	5	----	46	20.0	184	220	86	27	11	----	----	124	45.8	148	272
Middletown	28	5	----	33	13.5	211	244	45	31	4	----	----	80	34.8	150	230
Naugatuck	4	----	----	4	1.7	233	237	37	10	3	----	----	50	20.9	190	240
New Haven	15	----	----	15	2.9	498	513	130	26	3	----	----	159	29.1	387	546
New London	21	1	----	22	8.9	226	248	29	10	1	----	----	40	28.0	103	143
Norwich	20	5	----	25	9.4	241	266	53	8	1	----	----	62	25.7	179	241
Plainfield	----	----	----	----	----	98	98	24	6	----	----	----	30	22.6	103	133
Putnam	31	4	1	36	15.0	204	240	54	29	3	----	----	86	37.4	144	230
Rockville	4	----	----	4	4.4	87	91	35	15	5	----	----	55	43.6	71	126
South Manchester	6	----	----	6	3.8	150	156	61	16	3	----	----	80	28.9	197	277
South Norwalk	3	----	----	3	1.9	156	159	46	22	2	1	----	71	30.3	163	234
Stafford Springs	6	----	----	6	7.1	79	85	23	8	----	----	----	31	40.2	46	77
Torrington	8	----	----	8	4.3	180	188	58	31	2	1	1	93	47.4	103	196
Wallingford	4	----	----	4	2.3	169	173	47	16	6	----	----	69	31.4	151	220
Watertown	3	----	----	3	1.9	150	153	31	8	2	----	----	41	23.6	133	174
West Haven	30	----	----	30	10.5	256	286	63	20	6	----	----	89	35.0	165	254
Willimantic	18	4	----	22	12.4	156	178	37	6	----	----	----	43	21.5	157	200
Windsor	6	1	----	7	3.7	180	187	49	10	2	1	----	62	25.7	179	241
Winsted	9	----	----	9	4.2	207	216	61	10	4	1	1	77	39.1	120	197
Total	366	35	1	402	7.0	5,395	5,797	1,428	426	83	6	2	1,945	29.4	4,663	6,608
Percentage	6.3	0.6	.017	----	----	----	----	21.6	6.5	1.2	0.09	0.03	----	----	----	----

TABLE 2.—*Total numbers and percentages of thyroid enlargements among boys, girls, and both sexes, in each of 28 places in Connecticut*

Locality	Percentage			Number		
	Both sexes	Boys	Girls	Both sexes	Boys	Girls
All localities	18.9	7.0	29.4	2,347	402	1,945
Branford	12.5	5.9	18.9	51	12	39
Bridgeport	25.3	3.0	29.8	149	3	146
Bristol	20.8	6.1	30.0	95	11	84
Danbury	23.4	5.4	35.3	33	3	30
Danielson	9.7	1.8	20.5	28	2	26
Deep River	31.3	19.9	42.4	86	27	59
Enfield	14.1	2.9	24.5	89	9	80
Greenwich	15.8	4.7	24.8	82	11	71
Hartford	11.3	7.8	15.5	109	41	68
Meriden	33.8	20.0	45.8	170	46	124
Middletown	23.8	13.5	34.8	113	33	80
Naugatuck	11.3	1.7	20.9	54	4	50
New Haven	16.4	2.9	29.1	174	15	159
New London	15.8	8.9	28.0	62	22	40
Norwich	17.1	9.4	25.7	87	25	62
Plainfield	13.0	0	22.6	30	0	30
Putnam	25.9	15.0	37.4	122	36	86
Rockville	27.2	4.4	43.6	59	4	55
South Manchester	19.9	3.8	28.9	86	6	80
South Norwalk	18.8	1.9	30.3	74	3	71
Stafford Springs	22.8	7.1	40.2	37	6	31
Torrington	26.3	4.3	47.4	101	8	93
Wallingford	18.1	2.3	31.4	73	4	69
Watertown	13.5	1.9	23.6	44	3	41
West Haven	22.1	10.5	35.0	119	30	89
Willimantic	17.2	12.4	21.5	65	22	43
Windsor	16.1	3.7	25.7	69	7	62
Winsted	20.8	4.2	39.1	86	9	77

TABLE 3.—*Numbers and degrees of thyroid enlargements among 5,797 boys and 6,608 girls, by ages, in 28 localities in Connecticut*

Age	Boys							Girls								
	With enlarged thyroids							With enlarged thyroids								
	Degree of enlargement							Degree of enlargement								
	Very slight	Slight	Moderate	Total	Per cent	Normal	Total	Very slight	Slight	Moderate	Marked	Very marked	Total	Per cent	Normal	Total
10	----	----	----	----	----	10	10	1	----	----	----	----	1	20.0	4	5
11	11	2	----	13	12.3	93	106	19	2	----	----	----	21	19.2	88	109
12	26	5	----	31	7.0	413	444	107	19	4	1	----	131	23.7	422	553
13	65	6	1	72	8.2	803	875	272	57	9	----	1	339	28.9	836	1,175
14	123	14	----	137	9.0	1,390	1,527	352	114	16	1	----	483	28.7	1,201	1,684
15	77	6	----	83	6.4	1,215	1,298	296	98	21	1	----	416	30.7	941	1,357
16	40	2	----	42	4.9	812	854	201	71	16	1	----	289	31.6	624	913
17	20	----	----	20	4.4	430	450	135	43	11	1	----	190	33.5	376	566
18 and over	4	----	----	4	1.7	229	233	45	22	6	1	1	75	30.5	171	246
Total	366	35	1	402	----	5,395	5,797	1,428	426	83	6	2	1,945	----	4,663	6,608
Per cent	6.3	0.6	017	----	7.0	93.0	100.0	21.4	6.4	1.2	0.1	0.03	----	29.4	70.6	100.

TABLE 4.—*Sources and treatment of water supplies in 28 localities in Connecticut in which thyroid surveys were made*

City or town	Source of supply	Treatment	Chlorination
Branford	Surface reservoir	Storage	Yes
Bridgeport	do	do	Yes
Bristol	do	do	Yes
Danbury	do	do	No
Danielson	do	do	No
Deep River	do	do	No
Enfield	Surface reservoir fed mainly by springs	None	Yes
Greenwich	Surface reservoir	Storage, pressure sand filters, and alum	Yes
Hartford	do	Storage and slow sand filters	No
Meriden	do	Storage	Yes
Middletown	do	do	Yes
Naugatuck	do	do	No
New Haven	do	Storage (slow sand filters on Whitney supply)	Yes
New London	do	Storage	Yes
Norwich	do	do	Yes
Plainfield	Spring	None	No
Putnam	Surface reservoir	Rapid sand gravity filters, alum and sometimes soda ash	Yes
Rockville	do	Storage	No
South Manchester	do	Storage (rapid sand gravity filters alum—occasional)	Yes
South Norwalk	do	Storage and slow sand filtration	No [1]
Stafford Springs	do	Storage	Yes
Torrington	do	do	Yes
Wallingford	do	do	No
Watertown	Dug wells (emergency supply from surface reservoir)	None	No
West Haven	Same as New Haven		
Willimantic	Surface reservoir	Storage	Yes
Windsor	Same as Hartford		
Winsted	Surface reservoir	Storage	Yes

[1] Unless filters are by-passed

CURRENT WORLD PREVALENCE OF DISEASE

REVIEW OF THE MONTHLY EPIDEMIOLOGICAL REPORT ISSUED MAY 15, 1926, BY THE HEALTH SECTION OF THE LEAGUE OF NATIONS' SECRETARIAT [1]

Mild outbreaks of influenza during March and April in a number of European cities are indicated by the data made available in the Epidemiological Report published May 15 by the health section of the League of Nations' Secretariat. A definite rise in the number of influenza deaths was reported for the German cities as a group, for Stockholm, Amsterdam, Paris, and Milan, but the effect on the general mortality in these localities was slight. Somewhat more severe was the increase in deaths from influenza in the 105 great towns of England and Wales, which reached a peak in the week ended April 17; but even here the effect on the general mortality was not great and the epidemic was of shorter duration than the epidemics of the preceding years.

The mortality from influenza in cities in eastern and central Europe, including Prague, Vienna, and Budapest, showed only a slight seasonal increase coincident with the outbreaks in western Europe.

[1] From the Office of Statistical Investigations, United States Public Health Service

Plague.—Very few cases of plague were reported from the Mediterranean area during April. Only 9 cases occurred in Egypt during the month, 1 of which was at Alexandria and 4 were at Suez. One case was reported at Piræus, Greece, on April 23.

At Baghdad, plague reappeared early in 1926, after having been quiescent during the year 1925, and the number of cases has gradually increased. There were 12 cases reported in the two weeks ended April 10, and 37 cases in the following two weeks Only sporadic cases have appeared elsewhere in Iraq, and Basra has remained free from infection

In India, 32,593 deaths from plague were reported in the four weeks ended April 10, an increase of approximately 50 per cent over the preceding four weeks, and also an excess of 50 per cent over the corresponding period of 1925 One-half of the deaths occurred in the Punjab, where plague is much more prevalent than it was a year ago, though considerably less so than two years ago. (See Fig. 1.)

DEATHS FROM PLAGUE IN THE PUNJAB, 1923-24, 1924-25 AND 1925-26

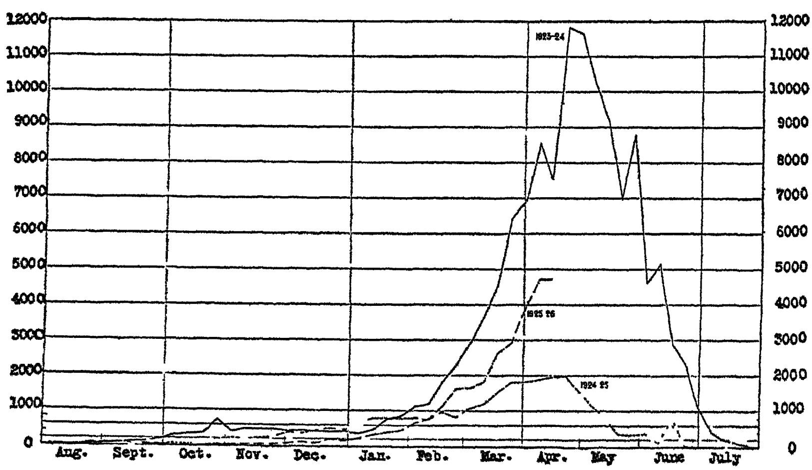


FIG 1

Plague was less prevalent during the early part of the year in Java, Siam, and French Indo-China than during the corresponding period of 1925.

The plague outbreak in the Orange Free State and adjacent districts of Cape Colony, Union of South Africa, resulted in 33 cases during March and April. Only four new cases were reported in the two weeks ended May 8.

Peru reported 394 cases of plague during the first quarter of 1926. All departments along the coast reported cases, except the northernmost and southernmost departments, but "the disease has never occurred in the Andes area or the provinces beyond the mountains," says the report.

Cholera—Cholera incidence was on the increase during April in Siam, French Indo-China, and India

In Siam, cholera cases started to increase about the middle of February, after having been declining during the two months preceding. New cases for the country outside of Bangkok showed no increase in the four weeks ended April 17 over the preceding four weeks, but the reports for Bangkok during the four weeks ended May 17 showed a marked increase in the upward trend of cases in that city.

TABLE 1.—*Cholera cases and deaths reported in Siam, September, 1925–April, 1926*

Four weeks ended—	Bangkok		Remainder of Siam	
	Cases	Deaths	Cases	Deaths
Sept 5	1	1	0	0
Oct 3	0	0	7	4
Oct 31	30	21	32	10
Nov 28	193	131	946	599
Dec 26	270	157	1,350	896
Jan 23	115	83	665	458
Feb 20	98	59	362	256
Mar 20	270	194	1,139	783
Apr 17	375	234	880	665
May 15	829			

In India more than half of the 8,211 deaths from cholera in the four weeks ended April 10 occurred in Bengal, and most of the remainder of the cases occurred in Bihar and Orissa and Madras Pres dency. While only 453 deaths from cholera were reported in Burma, this was a striking increase over the 76 deaths during the preceding four weeks and the 57 deaths in the corresponding four weeks of 1925. In French Indo-China, 2,469 cholera cases were reported during April, as compared with 1,666 in March. Approximately half of the cases were in Cambodia and half in Cochin-China, with a few in Laos.

Typhus and relapsing fever.—Typhus fever was somewhat more prevalent in Czechoslovakia during the winter 1925–26 than during the preceding winter; 286 cases were reported from November 1925 to April 1926, all in the sub-Carpathian part of the country, as compared with 60 cases during the corresponding six months of 1924–25

Both Bulgaria and the Kingdom of the Serbs, Croats, and Slovenes had a somewhat higher incidence of typhus fever in the first quarter of the year than in corresponding months of 1925.

Typhus fever was less prevalent in Poland and in Russia during the past winter than during any year since the World War. A few Russian districts bordering on the Ukraine did not show this decline.

Very few cases of relapsing fever were reported in recent months in Europe outside of Russia. In Russia the disease showed less decline than typhus as compared with 1925.

TABLE 2.—*Typhus and relapsing fever cases reported in European Russia (excluding the Ukraine) during the first two months of 1925 and 1926*

Geographical area	Typhus		Relapsing fever	
	1925	1926	1925	1926
Northeastern	754	396	3	1
Northwestern	889	[1] 198	137	[1] 33
Western	2,355	[1] 498	100	[1] 32
Central industrial	3,961	2,243	428	113
Central black soil	1,248	1,407	330	405
Middle Volga	1,720	1,019	324	361
Lower Volga	741	544	289	506
Viatka-Vetluga	1,170	[1] 388	27	[1] 14
Ural	1,649	[1] 278	825	[1] 59
North Caucasus	294	131	229	482
Crimea	41	59	5	181
Railways, waterways	366	194	65	83
Total	15,188	7,355	2,762	2,270

[1] Incomplete data

Korea reported 585 cases of typhus fever during the first quarter of the current year, nearly all in the Province of Keiko The disease is rare in Japan, and only 24 cases were reported in the first four months of 1926, 22 of which were in the district of Yamagata

The Epidemiological Report makes the following comment on relapsing fever in Africa:

Relapsing fever has been less prevalent during the early months of 1926 in the countries south of the north African Desert belt than during the corresponding season of the previous year. In Nigeria only 4 deaths from this disease were reported during the first quarter of the year, as against 202 during the first quarter of 1925 Only local outbreaks occurred at widely separated points of the Chad Colony and the upper Volta, being rather remnants of the terrible epidemics which visited these colonies during the previous years than in the nature of new epidemics. One hundred and two cases, 34 fatal, were reported during December in the subdistrict of Tougan, in the upper Volta, showing that the exceptional virulence of the disease nevertheless persisted. Two cases which occurred in Tunisia were the only relapsing fever cases reported during the first four months of the year in the African countries of the Mediterranean littoral

Smallpox.—Smallpox continued to be rare in most European countries. The situation in Switzerland has improved greatly in recent months and only five cases were reported in the 12 weeks ended May 12. The outbreak in northern England declined during April and May, with 662 cases reported in England and Wales during the four weeks ended May 22, approximately the same number that occurred in the corresponding period of 1925

Russia was unusually free from smallpox during the past winter; only the middle Volga area and districts further east reported more than a few sporadic cases.

"In North Africa the situation has been less favorable," says the report. "During the six months ending April 30, 1926, 1,608 cases were reported in Algeria, as against 766 and 62 cases, respectively, during the corresponding periods of 1924–25 and 1923–24. A similar, though less marked, increase has taken place in Egypt."

An outbreak of smallpox in the Gold Coast Colony was reported, with 601 cases during March. The type of disease appears to have been unusually mild, as very few deaths were reported. The Union of South Africa and British colonies and protectorates in South and East Africa were nearly free from smallpox in the first quarter of 1926.

Nearly half of the total cases of smallpox reported in India during March occurred in the Orissa division, where smallpox has been unusually prevalent. The annual maximum for this disease appears to have been reached in March.

Enteric fever.—April reports showed no change in the incidence of enteric fever in the various countries. Seasonal increases rarely occur in countries of the Northern Hemisphere before June. In Japan, where enteric fever was unusually prevalent early in the year, the April reports indicate a marked decline in the incidence of the disease, 1,480 cases having been reported during the four weeks ended April 24 as compared with 2,041 during the previous four weeks.

A rather wide variation in the fatality of enteric fever is shown by the data in Table 3. The report states: "It is probable that some of the high rates shown for certain countries in the table below may be due to incomplete case registration, but the disease is undoubtedly of a more severe type in certain non-European countries than in Europe."

TABLE 3.—*Fatality of enteric fever in certain countries during 1925*

Country	Cases	Deaths	Per cent fatal	Country	Cases	Deaths	Per cent fatal
Austria	718	52	7.2	Scotland (13 cities)	236	24	10.2
Bulgaria	3,444	465	13.5	Egypt	1,978	570	28.8
Czechoslovakia	6,886	541	7.9	Canada	1,985	412	20.8
Germany [1]	1,716	193	11.2	Chile	1,396	147	15.5
Greece	1,195	52	4.4	Guiana, British	304	64	21.2
Hungary	6,013	682	11.3	Panama Canal Zone	24	3	12.5
Lithuania	615	25	4.1	Uruguay	704	263	37.4
Netherlands	1,159	137	11.8	Iraq	325	45	13.8
Norway (cities)	406	12	3.0	Japan	50,829	9,533	18.8
Poland	14,025	1,099	7.8	Java and Madura	1,706	259	15.2
Rumania	7,437	792	10.6	Korea	5,480	972	17.7
				Palestine	785	76	9.7
Kingdom of the Serbs, Croats, and Slovenes	4,209	498	11.8	New Zealand	280	19	6.8

[1] For the first 18 weeks of 1926.

Lethargic encephalitis.—"No noteworthy increase in the number of cases of encephalitis had occurred in any country up to the beginning of May," says the report.

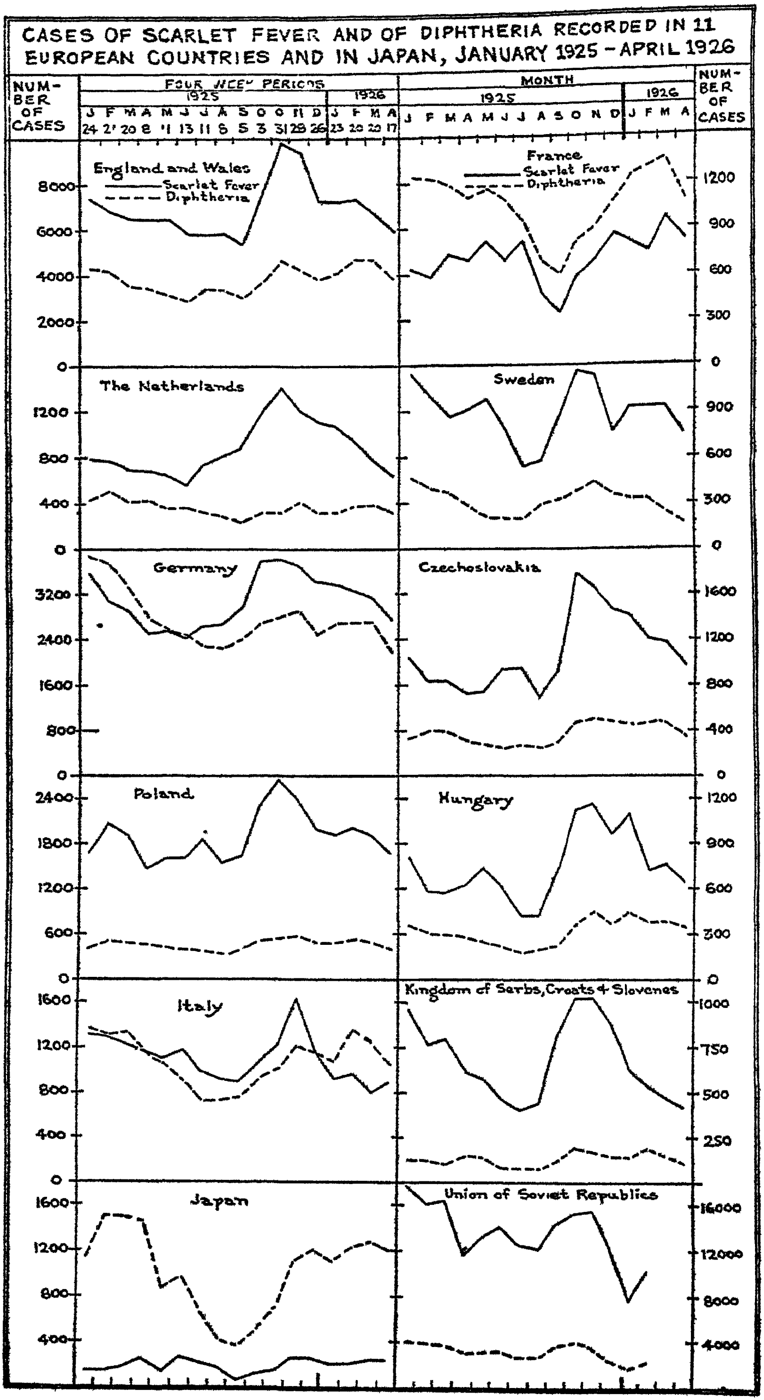

CASES OF SCARLET FEVER AND OF DIPHTHERIA RECORDED IN 11 EUROPEAN COUNTRIES AND IN JAPAN, JANUARY 1925 - APRIL 1926
NUMBER OF CASES
FOUR WEEK PERIODS
1925
1926
MONTH
1925
1926
NUMBER OF CASES
England and Wales
Scarlet Fever
Diphtheria
France
Scarlet Fever
Diphtheria
The Netherlands
Sweden
Germany
Czechoslovakia
Poland
Hungary
Italy
Kingdom of Serbs, Croats & Slovenes
Japan
Union of Soviet Republics

FIG. 2

Scarlet fever and diphtheria—The incidence of both scarlet fever and diphtheria showed a seasonal decline during March and April in the countries of the Northern Hemisphere The decline in the diphtheria incidence was less marked, however, than that in the scarlet fever incidence.

The reported cases of both scarlet fever and diphtheria in 11 European countries and in Japan are shown in Figure 2 by months or by four-week periods during the 16 months from January, 1925, to April, 1926 These graphs show quite clearly that scarlet fever was much more prevalent than diphtheria during this 16-month period. The diphtheria cases exceeded the scarlet fever cases only in France and Denmark, while the difference between them was slight in Germany and Italy In eastern Europe the scarlet fever cases outnumbered the diphtheria cases four or five to one It is clear from the graphs, also, that the seasonal variation in scarlet fever was greater than that for diphtheria.

CITY HEALTH OFFICERS, 1926

Directory of Those in Cities of 10,000 or More Population

Directories of the city health officers in the cities of the United States having a population of 10,000 or more have been published in the Public Health Reports [1] for each year from 1916 to 1925, for the information of health officers and others interested in public-health activities. These directories have been complied from data furnished by the health officers The cities included in this directory are those having 10,000 population or more on July 1, 1925, as estimated by the Bureau of the Census.

The asterisk (*) indicates that the officer so designated has been reported to be a "whole-time" health officer. For this purpose a "whole-time" officer is defined as "one who does not engage in the practice of medicine or any other business, but devotes all his time to official duties"

City	Name of health officer	Official title
Alabama		
Anniston	*George A Cryer, M D	County health officer
Bessemer		
Birmingham	*J D Dowling, M D	Do
Dothan	*L Roy Poole, M. D	County and city health officer.
Florence	*W D Hubbard, M D	Do
Gadsden	*Claude L Murphree, M D	County health officer
Mobile	*C A Mohr, M D	Do
Montgomery	*J L Bowman, M. D	County and city health officer
Selma	*L Tennent Lee, M D	County health officer
Tuscaloosa	*A A Kirk, M D	County and city health officer.

[1] Reprints Nos 346, 416, 494, 539, 599, 702, 767, 876, 930, and 1,025 from the Public Health Reports.

City	Name of health officer	Official title
Arizona		
Douglas	Z Causey, M D	City health officer
Phoenix	L D Dameron, M D	Do
Tucson	A Garfield Schnabel, M D	Do
Arkansas		
Fort Smith	*J E Johnson, M D	District health officer
Helena	W B Bruce, M D	County and city health officer.
Hot Springs	*Austin T Barr, M D	City health officer
Jonesboro	W C Overstreet, M D	Do
Little Rock	*William L Holt, M D	Do
North Little Rock	Howell Atkinson, M D	City physician
Pine Bluff	*F Michael Smith, M D	Do
California		
Alameda	Arthur Hieronymus, M D	Health officer
Alhambra	*Samuel J Stewart, M D	District health officer.
Bakersfield	Peter Joseph Cuneo, M. D	City health officer
Berkeley	*William P Shepard, M D	Do
Chico	Charles E Tovee	Do
Eureka	John N Chain, M D	Do
Fresno	C Mathewson, M D	Do
Glendale	*E M Miller, M D	Health officer
Long Beach	*G E McDonald, M D	Do
Los Angeles	*George Parrish, M D	Do
Modesto	James W Morgan, M D	Do
Oakland	Harry E Foster, M D	Do
Pasadena	*Warren F Fox, M D	Health officer and city physician.
Pomona	*Eugene F Fontaine, M D	District health officer
Richmond	Charles Robert Blake, M D	County and city health officer
Riverside	William B Wells, M D	Health officer
Sacramento	William Walter Cress, M D	City health officer
San Bernardino	Colin Campbell Owen, M D	City health officer and registrar of vital statistics
San Diego	*Alex M Lesem, M D	Health officer and superintendent
San Francisco	*William C Hassler, M D, Ph G	Health officer and registrar
San Jose	Henry C Brown, M D	Health officer
Santa Ana	*V G Presson, M D	County health officer
Santa Barbara	*W H. Eaton, M D	City health officer
Santa Cruz	E B Philbrook	Do
Santa Monica	A C Weaver, M D	City health physician.
Stockton	*John J Sippy, M D	District health officer
Vallejo		
Colorado		
Boulder	J. H Bush, M D	Director of public health
Colorado Springs	Omer R Gillett, M D	City health officer
Denver	*George A Collins	Manager of health and charity
Greeley	Burgett Woodcock, M D	City physician
Pueblo	*W E Buck, M D	Chief, department of health
Trinidad	G W Robinson, M D	City physician
Connecticut		
Ansonia	Frederick C Goldstein, M D	Health officer
Bridgeport	*William Hall Coon, M D	Do
Bristol	Benjamin B Robbins, M D	City health officer
Danbury		
Derby	Thomas F. Plunkett, M D	Health officer
East Hartford	F H Mayberry, M D	Do
Enfield	Frank F Simonton, M D	Do
Fairfield	*Laurence E. Poole, M D	Do.
Greenwich	Albert E Austin, M D	Do
Groton	Frank W Hewes, M D	Do
Hamden	George H Joslin, M D	Do
Hartford	*Charles P Botsford, M D	Superintendent of board of health and registrar of vital statistics
Manchester	D C. Y Moore, M. D	Chairman of board of health
Meriden	H De Forest Lockwood, M D	Health officer
Middletown	Thomas P Walsh, M D	Do
Milford	Willis S Putney, M D	City health officer.
Naugatuck		
New Britain	*Richard W Pullen, M D	Superintendent of health.
New Haven	*John L Rice, M D	Health officer
New London	*Benjamin N. Pennell, D V S	Do.
Norwalk		
Norwich	Edward J Brophy, M D	City health officer.
Orange		
Shelton	Gould A Shelton, M D	Do.
Stamford	*Raymond D Fear, M D	Health commissioner.
Stonington (Mystic)	Charles E Congdon, M. D	Town health officer.
Stratford	De Ruyter Howland, M D	Do.
Torrington	Elias Pratt, M D	City health officer
Wallingford	M. T. Sheehan, M. D	Town and borough health officer
Waterbury	*Thomas J Kilmartin, M D	City health officer.
West Hartford	Ralph W E. Alcott, M D	Town health officer
Willimantic	W P S Keating, M D	City health officer.
Delaware		
Wilmington	Fred F Armstrong, M. D	Secretary, board of health.

City	Name of health officer	Official title
District of Columbia		
Washington	*William C Fowler, M D	Health officer
Florida		
Jacksonville	*Noble A Upchurch, M D	City health officer
Key West		
Miami	*William A Claxton, M D, C M	Chief, division of health.
Orlando	Sylvan McElroy, M D	City physician
Pensacola	William D Nobles, M D	Health officer
St Petersburg	Ray Davies, M D	Commissioner of health
Tampa	*Ernest C Levy, M D	City health officer
West Palm Beach	*E D Clawson, V M D	Do
Georgia		
Albany	*Hugo Robinson, M D, Ph G	Commissioner of health
Athens	*J D Applewhite, M D	Health commissioner
Atlanta	*J P Kennedy, M D	City health officer
Augusta	Eugene E Murphey, M D	President, board of health.
Brunswick	*H L Akridge, M D	Commissioner of health
Columbus	*J D Jungman, M D	Do
La Grange	*S C Rutland, M D	Do
Macon	*C L Ridley, M D, D P H	Health officer
Rome	*B V Elmore, M D	Commissioner of health
Savannah	*Victor H Bassett, M D	Health officer
Valdosta	*Gordon T Crozier, M D	Cith health officer
Waycross	*George E Atwood, M D	Commissioner of health.
Idaho		
Boise	*R H Pratt	Health officer
Pocatello	H H Hughart, M D	City physician
Twin Falls	J E Langenwalter, M D	County physician
Illinois		
Alton	Daniel F Duggan, M D	Health commissioner
Aurora	George W Haan, M D	Do
Belleville	*Adam Herr	Public health officer
Berwyn	*P E Wright, M D	Health director
Bloomington	*Charles E Shultz, M D	Do
Blue Island	*L A Burkhart	Health commissioner
Cairo	Bellenden S Hutcheson, M D	City physician and health officer
Canton	C J Johnston, M D	City physician
Centralia	J R S Armstrong, M D	Health officer
Champaign	W E Schowengerdt, M. D	Do
Chicago	*Herman N Bundesen, M D	Commissioner of health.
Chicago Heights	E F Hay, M D	Health commissioner
Cicero	J J Hood, M D	Commissioner of health.
Collinsville	R. H Greane, M. D	Health officer
Danville	W C Dixon, M D	Health commissioner
Decatur	*William Shirey Keister, M D	Director of health
East Moline	J Henry Fowler, M D	Health officer
East St Louis	*John T Connors	Commissioner of health, property, and public buildings
Elgin	*A L Mann, M D	City physician
Evanston	Clarence T Roome, M D	Commissioner of health.
Forest Park	H P A Carstens, M D	Health commissioner
Freeport	Robert J Burns, M D	Commissioner of health.
Galesburg	E D Wing, M D	Health commissioner
Granite City		
Harvey	M R Morse, M D	Health officer
Herrin	Wm G. Davis	President, board of health
Jacksonville	*Warner H Newcomb, M D	County and city health officer.
Joliet	Ed J Higgins, M D	Commissioner of health
Kankakee	C K Smith, M D	Health officer
Kewanee	H N Heflin, M D	Health commissioner
La Salle	*Arlington Ailes, M D, C P H	Health officer
Lincoln	*Oscar Blackford	Do
Marion	H L Summers, M D	City physician
Mattoon	T O Freeman, M D	Health commissioner
Maywood	R L Reynolds, M D	Health officer
Moline	*E A Edlen, M D	City physician
Mount Vernon		
Murphysboro	R B Essick, M D	City physician
Oak Park	Frank S Needham, M D	Commissioner of health.
Ottawa	Enos E Palmer, M D	Health officer
Pekin	L R Cluy, M D	Do
Peoria	Joel Eastmen, M D	Health commissioner.
Quincy	*Thomas W Rhodes, M D	Public health officer
Rock Island	Harry Frey, M D	Health commissioner
Rockford	*N O Gunderson, M D	Commissioner of health
Springfield	*Raymond Voorhees Brokaw, M D	Superintendent of health
Streator		
Urbana	W F Burris, M D	Health officer.
Waukegan	Howard Carlisle Hoag, M D	City health physician.
West Frankfort	C H Eldridge, M D	Health officer.

City	Name of health officer	Official title
Indiana		
Anderson	Ernest M Conrad, M D	Secretary, board of health
Bloomington	J E Moser, M D	Do
Clinton	David Ott Casey, M D	Do
Connersville	B R Smith, M D	Do
Crawfordsville	Thomas Z Ball, M D	City health commissioner
East Chicago	Milton A Given, M D	Secretary, board of health.
Elkhart	A A Morris, M D	Do
Elwood	Harry W Fitzpatrick, M D	Secretary, health department
Evansville	William E Barnes, M D	Secretary, board of health
Fort Wayne	Daniel R Beuninghoff, M D	Do
Frankfort	Benson Ruddell, M D	Do
Gary	B W Harris, M D	Health officer
Hammond	William A Buchanan, M D	Secretary, board of health
Huntington		
Indianapolis	*H G Morgan, M D	City sanitarian
Jeffersonville	Davis L Field, M D	Secretary, board of health
Kokomo	T C Cochran, M D	City health officer
La Porte	*John Pracher, M D	Do
Lafayette	Earl Van Reed, M D	Secretary, board of health.
Logansport	*Fred G Six	Health inspector
Marion	F A Priest, M D	Secretary, board of health
Michigan City	Nelle C Reed, M D	Do
Mishawaka	B J Wyland, M D	Do
Muncie	Earle S Green, M D	Secretary, city board of health
New Albany	H B Shacklett, M D	Do
New Castle	C C Bitler, M D	City health officer
Peru	Omer U Carl, M D	Secretary, board of health
Richmond	Richard Schillinger, M D	Do
South Bend	J B Berteling, M D	Do
Terre Haute	George T Johnson, M D	Do
Vincennes	P G Moore, M D	Do
Wabash	P G Moore, M D	City health officer
Whiting	E L Dewey, M D	Secretary, board of health
Iowa.		
Boone	William Woodburn, M D	Health officer
Burlington	George H Steinle, M D	Health officer and city physician
Cedar Rapids	*A Thusty	Health officer
Clinton	H R Sugg	Health officer
Council Bluffs	A A Robertson, M D	City health officer
Davenport	*Theodore J Meyer	Do
Des Moines	*Harley L Sayler, M D	Health commissioner
Dubuque	*D C Steelsmith, M D, C P H	Director of health
Fort Dodge	*E S Welch	Sanitary police
Fort Madison	J M Casey, M D	Physician to board of health
Iowa City	George H Scanlon, M D	Health officer
Keokuk	Bruce L Gilfillan, M D	Physician board of health
Marshalltown	B L Frey, M D	City health officer
Mason City	Matthew J Fitzpatrick, M D	Health physician
Muscatine		
Ottumwa	J W Elerick, M D	City physician
Sioux City	*W D Hayes, C P H	Commissioner of public health
Waterloo	J R Thompson M D	Health officer
Kansas		
Arkansas City	B C Geeslin, M D	Do
Atchison	Charles W Robinson, M D	City health officer
Chanute	M A Duncan, M D	Health officer
Coffeyville	W H Wells, M D	City physician and health officer
El Dorado	*O H Landrith	City health officer
Emporia	*J S Fulton, M D	County health officer
Fort Scott	C L Mosley, M D	Assistant collaborating epidemiologist, U S P H S
Hutchinson	Guy R Walker, M D	City physician
Independence	C O Shepard, M D	Do
Kansas City	*S David Henry, M D	Health commissioner
Lawrence	H L Chambers, M D	Superintendent, health department
Leavenworth	C D Lloyd, M. D	City health officer
Newton	O W Roff, M D	County and city health officer
Parsons	*L B Kackley, M D	Health officer
Pittsburg	Ralph E Jenkins, M D	City health officer.
Salina	E M Sutton, M D	County health officer.
Topeka	*I O Church, M D	City health officer
Wichita	*Dewey H Cooper, M D	Director of public welfare.
Kentucky		
Ashland		
Covington	James P Riffe, M D	Commissioner of health
Henderson	J. U Ridley, M. D	Health officer
Lexington	*Charles H. Voorhies, M D	Do.
Louisville		
Newport	William Arnold Krieger, M. D	Do
Owensboro	*R M Hathaway, M. D	Director of health
Paducah	*Floyd P. Allen, M D	Chief health officer.

City	Name of health officer	Official title
Louisiana		
Alexandria	J A Parker, M D	President, board of health
Baton Rouge	T J McHugh, M D	City health officer
Lake Charles	John Green Martin, M D	Do
Monroe	D I Hirsch, M D	Do
New Orleans	*William H Robin, M D	Superintendent, public health.
Shreveport	*A G Heath, M D	Health officer
Maine		
Auburn	*C E Williams, M D	Do
Augusta	George A Coombs, M D	Do
Bangor	*Harry D McNeil, M D	Do
Bath	*Chester S Kingsley	City sanitarian
Biddeford	*John W Mahoney	Health officer
Lewiston	*L J Dumont, M D	Do
Portland	*Thomas Tetreau, M D	Do
Sanford	*C W Blagden, M D	Do
South Portland	Reginald T Lombard, M D	Do
Waterville	*William James Young, M D	City health officer
Westbrook	Patrick H Welch	Health officer
Maryland		
Annapolis		
Baltimore	*Charles Hampson Jones, M D	Commissioner of health and registrar of vital statistics
Cumberland	*Harvey H Weiss	Health officer and registrar of vital statistics
Frederick	*E C Kefauver, M D	Health officer
Hagerstown	Henry R Kritzer, M D	County health officer
Massachusetts		
Adams	*Leland French, M D	District health officer
Amesbury	*Charles B Kingsbury	Agent, board of health
Arlington	*William H Bradley	Do
Athol	Marion B Sibley, M D	Secretary, board of health.
Attleboro	William O Hewitt, M D	Health officer
Belmont	*Henry Berger, jr, C P H	Do
Beverly	*Alonzo O Woodbury	Agent, board of health
Boston	*Francis X Mahoney, M D, M D. V	Health commissioner
Braintree	Willis H Martin	Chairman, board of health
Brockton	David B Tuholski, M D	Health officer
Brookline	Francis P Denny, M D	Do
Cambridge	*S B Kelleher, M D	Medical inspector
Chelsea	*John F Welch	Health officer
Chicopee	*Gertrude M De Witt	Agent, board of health
Clinton	*Frederick E Murphy	Do
Danvers	*Hugo Nappe	Health officer
Dedham	Edward Knobel, M D V	Chairman, health department
Easthampton	C C Buckner, M D	Agent, board of health
Everett	*William F Hogan	Do
Fall River	*Samuel B Morriss	Do
Fitchburg	*Fred R Brigham	Do
Framingham	*Everett B Johnson	Agent and executive officer, board of health
Gardner	*William P O'Donnell	Agent, board of health
Gloucester	George S Rust, M. D	Physician to board of health.
Greenfield	*George P Moore	Health agent
Haverhill	*George T Lennon	Agent, board of health
Holyoke	*J Sidney Wright	Agent and health officer
Lawrence	Peter L McKallagat, M D	Chairman, board of health
Leominster	Frederick C Shultis, M D	Do
Lowell	*Francis J O'Hare	Agent, board of health
Lynn	Michael R Donovan, M D	Commissioner of public health.
Malden	*Frederick Walmsley	Health inspector
Marlborough	*John J Cassidy	Agent, board of health
Medford	William N Lanigan, M D	Medical inspector
Melrose	Clarence P Holden, M D	Chairman, board of health
Methuen	Rolf C Norris, M D	Board of health physician
Milford	James Birmingham	Sanitary inspector
Milton	Paul W Kimball, M D	Agent, board of health
Natick	Thomas F Morris	Do
New Bedford	*Wm G Kirschbaum	Agent and executive officer.
Newburyport	*William Thurston	Agent and clerk
Newton	*Alfred M Russell	Agent, board of health
North Adams	*Douglas W Hyde	Do
Northampton	George R Turner	Do
Northbridge	*D C Duggan	Chairman, board of health
Norwood	James J Mulvehill	City health officer
Palmer	J P Schneider, M D	Do
Peabody	*James J Ray	Agent, board of health
Pittsfield	*Willys M Monroe, M D	City health officer
Plymouth	Walter D Shurtleff, M D	Health officer and agent
Quincy	Fred A Bartlett, M D	Health commissioner
Revere	Francis Licata, M D	Chairman, board of health
Salem	*John J McGrath	Agent, board of health
Saugus	Charles E Light	Chairman, board of health.
Somerville	Frank L Morse, M D	Medical inspector.

City	Name of health officer	Official title
Massachusetts—Continued		
Southbridge	*Albert R Brown	Agent, board of health.
Springfield	*Jacob R. Sackett	Do
Taunton	T F Cusick, M D	City health officer
Wakefield	David Taggart	Health officer
Waltham	C B Fuller, M D	Director
Watertown	*John W Tapper	Agent, board of health.
Webster	Bernard Plouffe, M D	City health officer
West Springfield	John J Lysaght	Agent, board of health
Westfield	Robert McClellan Marr, M D	Chairman, board of health
Weymouth		
Winchester	*Maurice Dinneen	Health officer and agent.
Winthrop	*William D Childress	Do
Woburn	*Edward T Gorman	Agent and secretary
Worcester	*Thomas F Kenney, M D	Director of health
Michigan		
Adrian	Emily S Stark, M D	Health officer and city physician.
Alpena	D A Cameron, M D	City physician
Ann Arbor	John A Wessinger, M D	Health officer
Battle Creek	*A A Hoyt, M D	Do
Bay City	G W Moore, M D	Do
Benton Harbor	Carl A Mitchell, M D	Director of public health
Cadillac	John F Gruber, M D	Health officer
Detroit	*Henry F Vaughn	Commissioner of health.
Escanaba	*Harry J Defnet, M D	Do.
Flint	*C V Merritt, M D	Health officer
Grand Rapids	*C C Slemons, M D	Do.
Hamtramck	T T Dysarz, M D	Do
Highland Park	William N Braley, M D	Do
Holland		
Ironwood	*Louis Dorpat, M D	Do.
Ishpeming	*George G Barnett, M D	City health officer.
Jackson	*Floyd Raymond Town, M D	Health officer
Kalamazoo	*Alvin H Rockwell, M. D	Do
Lansing	*S. Rowland Hill, M D	Health director
Marquette	*L L Youngquist, M D	Health officer
Monroe	Varnum C Southworth, M D	City physician
Mount Clemens	Edward G. Folsom, M D	Health officer.
Muskegon	R J Harrington, M D	Do.
Muskegon Heights	William S. Chapin, M D	Health officer and city physician.
Owosso	R. C Mahaney, M. D	Health officer
Pontiac	*C A Neafie, M D	Director of public health
Port Huron	*Gertrude O'Sullivan, M. D	City physician
River Rouge	Claud Smith, M. D	Health officer
Saginaw	*William Henry Pickett, M. D, C P H	Do
Sault Ste Marie	*John J Griffin, M D	City health officer
Traverse City	George A Holliday, M D	Health officer
Wyandotte	Alfred C Drouillard, M D	Physician and surgeon.
Minnesota		
Albert Lea	D S Branham, M. D	Health officer
Austin	Clifford C Leck, M D	Chairman, board of health.
Brainerd	R. A Beise, M. D	Health officer
Duluth	Lincoln A Sukeforth, M. D	Director of public health
Faribault	Frederick U. Davis, M. D	Health commissioner
Hibbing	G N. Butchart, M. D	Health officer
Mankato	Thomas C Kelly, M D	Health commissioner
Minneapolis	*Francis E Harrington, M D, LL D	Commissioner of health
Rochester	C H Mayo, M D [1]	Health officer
St Cloud	P E Stangl, M D	City physician.
St Paul	*Benjamin F. Simon, M D	Health officer
Virginia	Robert P Pearsall, M D	Do
Winona	William V. Lindsay, M. D	Do
Mississippi		
Biloxi	George F. Carroll, M. D	City health officer
Columbus	W. J C Wiemers, M. D	Do
Greenville	*A J Ware, M D	City and county health officer
Hattiesburg	*W D Beacham, M D	County health officer
Jackson	*J B Black, M D	Director, county health department.
Laurel	*John M Kittrell, M D	County and city health officer.
Meridian	T. J Houston, M D	City health officer
Natchez	W H. Aikman, M. D	Do
Vicksburg	S. Meyers, M. D	County and city health officer.
Missouri		
Cape Girardeau	*Robert Wilson	Health officer.
Carthage		
Columbia	*Finis Suggett, M. D	County health officer.
Hannibal	*Eugene M. Lucke, M D	Field agent
Independence	H A Schraeder, M D	City health officer
Jefferson City	Hugh G. Dallas, M. D	City physician
Joplin	*M. B Harutun, M. D	Commissioner of health.
Kansas City	*Herman E. Pearse, M. D	Health director.

[1] A full-time deputy health officer employed.

City	Name of health officer	Official title
Missouri—Continued		
Moberly	C H Dixon, M D	Health commissioner
Sedalia	*W S Bradford M D	County health officer
St Joseph	W W Gray, M D	Health officer
St Louis	*Max C Starkloff, M D	Health commissioner
Springfield	*Lon Sharp	Commissioner of health and sanitation
Webster Groves	Arthur W Westrup, M D	Health commissioner
Montana		
Anaconda	Gail R Soper, M D	City health officer
Billings	James I Wernham, M D	Health officer
Butte	J B Freund, M. D	City physician
Great Falls	*Thomas F Walker, M D	Health officer
Helena	*Arthur Jordan, M D	Field agent, U S P H S, and health officer
Missoula	*F D Pease, M D	Health officer
Nebraska		
Grand Island	Frank D Ryder, M D	City physician
Hastings	*James V Beghtol, M D	Do
Lincoln	*Chauncey F Chapman, M D, Ph G	Superintendent of health
North Platte	Josiah B Redfield, M D	City physician
Omaha	A S Pinto, M D	Health commissioner
Nevada		
Reno	A F. Adams, M D, Ph G	Secretary, board of health.
New Hampshire		
Berlin	*Harry F Leeds	Health officer
Claremont	William P Prescott	Do
Concord	*Charles E Palmer	Sanitary officer
Dover	*William E Whiteley	Executive officer.
Keene	*Fred C. Nims	Health officer
Laconia	W H. True, M D	Do
Manchester	*Howard A Streeter, M D	Do
Nashua	P J McLaughlin, M D	Chairman, board of health.
Portsmouth	Samuel T Ladd, M D	Inspector and bacteriologist.
Rochester		
New Jersey		
Asbury Park	*B H Obert	Health officer
Atlantic City	S L Salasin, M D	Do
Bayonne	William W Brooke, M. D	Do
Belleville	*Eugene Thomas Berry	Do
Bloomfield	*Joseph C. Saile, Ph G, D V S.	Do
Bridgeton	*Charles E Bellows, Ph G	Sanitary inspector
Camden	*A L Stone, M D	Director of public health.
Carteret	Herbert L Strandberg, M D	Health officer
Clifton	J P Quinlan	Do
Collingswood	Edward B Rogers, M. D	Medical inspector
Dover	*John G Taylor	Health officer
East Orange	*F J Osborne	Health officer and registrar of vital statistics
Elizabeth	*Louis J Richards	Health officer
Englewood	*John A Manson	Sanitary inspector.
Garfield	Charles B Bleasby, M D	Health officer
Gloucester	J Alonzo Beek, M D	Do
Hackensack	*L Van D Chandler	Do
Harrison	*John T McClure	Do
Hoboken	Joseph F X Stack, M D	Commissioner of health
Irvington	*Paul C Schotte, Ph D	Health officer
Jersey City	*James J Hagan	Do
Kearny	*Amos Field, jr	Do
Lodi	Henry H Brevoort, M D	Health inspector
Long Branch	*R Clifford Errickson	Health officer
Millville		
Montclair	*Carl T Pomeroy	Do
Morristown	*John F Kilkenny	Do
New Brunswick	E I Cronk, M. D	Health officer and registrar of vital statistics
Newark	*Charles V Craster, M. D, D P H	Health officer
Nutley	*Eugene H Sullivan, R. N	Executive officer.
Orange	*Lenore Young, R N	Health officer and registrar of vital statistics
Passaic	John N Ryan, M D	Health officer
Paterson	*Frederick P Lee, M D	Do
Perth Amboy	*Charles S. Thompson, D. V S.	Do
Phillipsburg	Alma L Wilston, M D	Town physician
Plainfield	*N J Randolph Chandler	Health officer
Rahway	*Fred M Williams	Executive officer
Red Bank		
Ridgefield Park	William F Reynolds, D. V. M.	Sanitary inspector.
Rutherford	*Marine Dunn	Do.
Summit	Henry P. Dengler, M. D	Health officer.
Trenton	*Alton S Fell, M D	Do
Union City	Grant P Curtis, M. D	Do.

City	Name of health officer	Official title
New Jersey—Continued		
West New York	*Rudolph Kunze	Chief inspector
West Orange	*David E Buckley	Health officer and registrar.
Westfield	*Andrew Carney	Executive officer
New Mexico		
Albuquerque	*James R Scott, M D, Ph D.	County health officer.
New York		
Albany	James W Wiltse, M D	Health officer
Amsterdam	Julius Schiller, M D	Do
Auburn	Thomas C Sawyer, M D	City health officer
Batavia	E F Weil, M D	Do
Beacon	Charles B Dugan, M D	Health officer
Binghamton	C J Longstreet, M D	Do
Buffalo	*Francis E Fronczak, M D, LL B, Dr Sc P H	Health commissioner.
Cohoes	E M Bell, M D	Heath officer
Corning	Henry E Elwood, jr, M D	Do
Cortland	A C Knapp, M D	Do
Dunkirk	G E Ellis, M D	Do
Elmira	Reeve B Howland, M D	City health officer
Endicott	Dorr W Hardy, M D	Health officer
Freeport	William H Runcie, M D	Health commissioner
Fulton	C L Fessenden, M D	Health officer
Geneva	C W Grove, M D	Do
Glens Falls	*Virgil D Selleck, M D, C P H	Do
Gloversville	Alex L Johnson, M D	Do
Herkimer	James W Graves, M D	Do
Hornell	George E Taylor, M D	Do
Hudson	Charles R Skinner, M D	Do
Ilion	Frank B Conterman, M D	Do
Ithaca	*Lewell T Genung, M D	Do
Jamestown	*John J Mahoney, M D	Superintendent, public health
Johnson City	Rollin O Crosier, M D	Health officer
Johnstown	Guy Vail Wilson, M D	Do
Kingston	Daniel Connelly, M D	Do
Lackawanna	A S Culkowski, M D	Do
Little Falls	A B Santry, M D	Do
Lockport	Thomas E Spalding, M D	City physician
Middletown	H J Shelley, M D	Health officer
Mount Vernon	Frank W Shipman, M D	Health commissioner
New Rochelle	*Edwin H Codding, M D	Health officer
New York	*Louis I Harris, M D, D P H.	Commissioner of health.
Newburgh	Thomas J Burke, M D	Health officer
Niagara Falls	Edward E Gillick, M D	Do
North Tonawanda	Henry C Lapp, M D	Do
Ogdensburg	J W Benton, M D	Do
Olean	W E MacDuffie, M D	Commissioner of health
Oneida	Nelson O Brooks, M D	Health officer
Oneonta		
Ossining	Amos O Squire, M D	Do
Oswego	Harvey S Albertson, M D	Do
Peekskill	Fred A Snowden, M D	Do
Plattsburg	Leo F Schiff, M D	Do
Port Chester	William J Sheehan, M D	Do
Port Jervis	G Otto Pobe, M D	City health officer
Poughkeepsie	*W H Conger, M D	Health officer
Rensselaer	Earle W Wilkins, M D	Do
Rochester	*George Washington Goler, M D	Do
Rome	Roy J Marshall, M D	Do
Salamanca	P H Bourne, M D	Do
Saratoga Springs	Charles B Small, M D	City health officer
Schenectady	J H Collins, M D	Commissioner of health
Syracuse	Herman G Weiskotten, M D	Do
Tonawanda	John T Harris, M D	Health officer
Troy	William N Campaigne, M D	Do
Utica	Hugh H Shaw, M D	Do
Watertown		
Watervliet	Charles A Birmingham, M D	Do
White Plains	Edwin G Ramsdell, M D	Health officer
Yonkers	C W Buckmaster, M D, C P H	Commissioner of health
North Carolina		
Asheville	*Daniel F Sevier, M D	Health officer
Charlotte	*W A McPhaul, M D	City and county health officer.
Concord	*Sidney E Buchanan, M D	Do
Durham	*J H Epperson, M S	Superintendent of health
Gastonia		
Goldsboro	*L W Corbett, M D	County health officer
Greensboro	*C Curtis Hudson, M D	Health officer.
High Point	S S Coe, M D	City physician
Kinston	*Robert Sherwood McGeachy, M D	County health officer.
New Bern	*D. E Ford, M D	Do

City	Name of health officer	Official title
North Carolina—Continued		
Raleigh	*A C Bulla, M D	Health officer
Rocky Mount	H Lee Large, M D	Do
Salisbury	*C W Armstrong, M D	Do
Wilmington	*John H Hamilton, M D	County health officer.
Wilson	*L J Smith, M D	Health officer
Winston-Salem	*R L Carlton, M D	City health officer
North Dakota		
Fargo	*B K Kilbourne, M D	Do
Grand Forks	E C Haagensen, M D	Do
Minot		
Ohio		
Akron	*Donald D Shira, M D	Director of health
Alliance	Floyd R Stamp, M D	Health commissioner.
Ashland	Eldred L Clem, M D	Director of public welfare
Ashtabula	Azro J Pardee, M D	Health officer
Barberton	W A Mansfield, M D	Health commissioner
Bellaire	W J Shepard, M D	Do
Bellefontaine	A J McCracken, M D	City health commissioner.
Bucyrus	A H McCrory, M D	Health commissioner
Cambridge	Clyde L Vorhies, M D	Do
Canton		
Chillicothe	*G E Robbins, M D	Commissioner of health
Cincinnati	*William H Peters, M D	Health commissioner
Cleveland	*Harry L Rockwood, M D	Commissioner of health
Cleveland Heights	*Robert Lockhart, M D	Director of health
Columbus	*James A Beer, M D	Health commissioner
Conneaut	Inez Hyatt, M D	Local health commissioner
Coshocton	*D M Criswell, M D	Health commissioner
Cuyahoga Falls	*R H Markwith, M D	Do
Dayton	*A O Peters, M D	Commissioner of health
East Cleveland	George W Stober, M D	Director of health
East Liverpool	*J A Fraser, M D	City health commissioner.
East Youngstown	James S Mariner, M D	Health commissioner.
Elyria	G E French, M D	Do
Findlay	*Edward W Misamore, M D	Do
Fostoria	*W N Caldwell	Do
Fremont	E L Vermilya, M. D	Do
Hamilton	Anderson L Smedley, M D	Commissioner of health.
Ironton	O U O'Neill, M D	Health commissioner
Kenmore	*R H Markwith, M D	Do
Lakewood	Wallace J Benner, M D	Do
Lancaster	Clifford B Snider, M D	Do
Lima	James B Poling, M D	Do.
Lorain	Valloyd Adair, M D	Do
Mansfield	*C D Barrett, M D, C P H.	Do
Marietta	John W Donaldson, M D	Do.
Marion	*W J Weiser, M D	Do.
Martins Ferry	*Charles Keller	Do
Massillon	*John H Williams	Do
Middletown	G D Lummis, M D	Do.
New Philadelphia		
Newark	William Henry Knauss, M. D	Do.
Niles	W A Werner, M D	Do
Norwood	Louis O Saur, M D	Do.
Piqua	J G Freshour, M D	Do
Portsmouth		
Salem	T T Church, M D	Commissioner of health.
Sandusky	*F M Houghtaling, M D	Health commissioner.
Springfield	*Oscar M Craven, M. D	Director of public health
Steubenville	*J A Madigan	Health commissioner
Tiffin	J A Gosling, M D	Do
Toledo	Daniel W Iford, M D	Commissioner of health
Warren	George N Simpson, M D	Do
Youngstown	H E Welch, M D	Do
Zanesville	David J Evans, M D	Health commissioner
Oklahoma:		
Ardmore	Ambert Young Easterwood, M D.	City health officer
Bartlesville		
Chickasha	Arthur W Nunnery, M D	City superintendent of health.
Enid	R C Baker, M. D	Do
Guthrie	William C Miller M D	City physician
McAlester		
Muskogee	Finis W Ewing, M D	City health officer.
Oklahoma City		
Okmulgee	W M Cott, M. D	Do
Sapulpa	P K Lewis, M D	Superintendent of health
Shawnee	*J. C Baker	Building inspector.
Tulsa	David Albert Beard, M. D	Superintendent of health
Oregon		
Astoria	N S Vernon, M D	City and county health officer
Eugene	S M Kerron, M. D	Do.
Portland	*John G Abele, M D	City health officer.
Salem	*Walter H Brown, M D, C P H	City and county health officer

City	Name of health officer	Official title
Pennsylvania		
Allentown	*J TreichlerButz, M D , D D S.	Health officer
Altoona	*T G Herbert	Chief, bureau of health
Ambridge	*Louis Herrmann	Health officer
Beaver Falls	*Nelson W Osmond	Do
Berwick	*C W Shannon	Do
Bethlehem	F J Conahan, M D	Do
Braddock	*James E Wills	Do
Bradford	*Carl L Peterson	Do
Bristol	John M Wright	Do
Butler	*J Fred Leetch	Do
Canonsburg	*J M Templeton	Do
Carbondale	*Daniel Munley	Sanitary officer
Carlisle	*A P Liszman	Health officer
Carnegie	Joseph Lewis	Do
Carrick	William Windeknecht	Park commissioner
Chambersburg	Frank J Croft	Health officer
Charleroi	*W M Darby	Health inspector
Chester	*Mark G Murtaugh	Health officer
Clairton	*William P Davidson	Do
Coatesville	*Charles V Peace, V M D	Do
Columbia	George M Rodenhauser	Do
Connellsville	*John Irwin	Do
Dickson City	*Frank J Meehan	Do
Donora	*John W Harrington	Do
Dubois	*E S Hoover	Do
Dunmore		Do
Duquesne	*Emil Elmgren	Do
Easton	J James Condran, M D	Do
Ellwood City	*Louis Young	Do
Erie	*John W Wright, M D	Do
Farrell	*William C Heinze	Do
Franklin	Charles H Brown, M D	Do
Greensburg	*T Ray Hunter	Do
Harrisburg	John M J Raunick, M D	Director
Hazleton	*P J Bonner	Health officer
Homestead	*James L King	Do
Jeanette	*A T Coon	Chief health officer
Johnstown	L W Jones, M D	Health officer
Kingston	*J F Seward	Do
Lancaster	*Benjamin F Charles	Do
Lansford		
Latrobe	W T Osborne	Do
Lebanon	F B Witmer, M D	City health officer
Lewistown	H E Fetterolf	Health officer
McKees Rocks		
McKeesport	*Daniel F Marsh	Do
Mahanoy City	*John Sullivan	Do
Meadville	*John L Laley	City health officer
Monessen	*Francis E Gibson	Do
Mount Carmel	*Fred Gross	Do
Nanticoke	*H J Abbott	Health officer
New Castle	William L Steen, M D	Do
New Kensington		
Norristown	*Charles E White	Do
North Braddock	*Robert M Sylves	Do
Oil City	*W J Lewis	Do
Old Forge	Gulius Biscontine	Do
Olyphant	*James L O'Malley	Do
Philadelphia	*A A Cairns, M D	Chief of bureau of health.
Phoenixville	Allen L Bevan	Health officer
Pittsburgh	*Carey J Vaux, M D	Director
Pittston	*Michael A McHale	Health officer
Pottstown	*A John Andrie	Do
Pottsville	*David Thomas	Do
Punxsutawney	J Frank Boney	Do
Reading	*Ira J Hain, M D	Do
Scranton	James D Lewis, M D	Director of public health
Shamokin	*Fred Zeiser	Health officer
Sharon	*L C Brainard	Sanitary officer
Shenandoah	*Cyrus Geise	Health officer
Steelton	*E G Butler	Do
Sunbury	*V A Kohle	Do
Swissvale	*E H Wasmuth	Secretary board of health
Tamaqua	Lamont Perrine	Health officer
Taylor	B F Edwards, M D	Do.
Tyrone Borough	John I Patterson	Do.
Uniontown	*W. C Hall	Do.
Vandergrift	J. Elmer Spang	Do
Warren	*Ralph N. Brown	Do
Washington	*Thomas W. Henderson	Secretary board of health
Waynesboro	*Percy H Snowberger	Health officer
West Chester	*Enoch P. Hershey	Do
Wilkes-Barre	G A Clark, M D	City physician
Williamsburg	J F Gibboney	Health officer

City	Name of health officer	Official title
Pennsylvania—Continued		
Williamsport	Robert F Trainer, M D	Health officer
Windber	S W McMullen	Do
Woodlawn	*James E Tanner	Do
York	J Frank Small, M D	Director of public health.
Rhode Island		
Bristol	John H Magee, Ph D	Health officer
Central Falls	Adolph R V Fenwick, M D	Superintendent of health
Cranston	Daniel S Latham, M D	Do
East Providence	W H T Hamill M D	Health officer
Newport	Edward V Murphy, M D	Executive officer, board of health.
Pawtucket	Florian A Ruest, M D	Superintendent of health
Providence	*Charles V Chapin, M D	Do
Warwick	Ralph Fred Lockwood, M D	Health officer.
West Warwick	H Barton Bryer, M D	Do
Westerly	Samuel C Webster, M D, Ph G	Superintendent of health.
Woonsocket	William A Bernard, M D	Health officer
South Carolina		
Anderson	*E R Van de Grift, D V M	Do
Charleston	*Leon Banov, M D	Do
Columbia	M M Rice, M D	Do
Florence	*P H Brigham, M D, D D S	Health commissioner.
Greenville	*Irving S Barksdale, M D	Do
Sumter	*John R Sumter	Health officer
South Dakota		
Aberdeen	*George M Boteler, M D	Do
Sioux Falls	*Francis M Munson, M D	City health officer
Watertown	A M Freeburg, M D	County health officer.
Tennessee		
Chattanooga	*G. B Crittenden, M D	Director of health
Jackson	Hermon Hawkins, M D	City physician
Johnson City	*C S Kinzer, M D	Health officer
Knoxville	*M F Haygood, M D	Do
Memphis	*J J Durrett, M. D, Ph G	Superintendent of health.
Nashville	*W E Hibbett, M D	City health officer
Texas		
Abilene	Scott W. Hollis, M D	City and county health officer.
Amarillo	A H Lindsay, M D	City physician
Beaumont	Dru McMickin, M D	City health officer.
Cleburne	James D Osborn, M D	Do
Corpus Christi	A H Speer, M D	Do
Corsicana	William R Sneed, M D	Do.
Dallas	*N W Andrews, M D	Director of public health.
Del Rio	B F Orr, M D	City health officer
Denison	Alex W Acheson, M D	Health officer
Eastland	E R Townsend, M D	City health officer
El Paso	*R A Wilson, M D	Do
Fort Worth	*Leon H Martin, M D	Director public health and welfare
Galveston	Walter Kleberg, M D	Health officer
Houston	*Arthur Heath Flickwir, M D	City health officer
Orange	James H Dameron, M D	Do
Port Arthur	Pat Reed, M D	City physician
Ranger	*Wade Swift	Sanitary officer
San Angelo	A C De Long, M D	City health officer
San Antonio	W A King, M D	Health officer
Sherman	J A Swafford, M D	City physician and director of public welfare
Temple	J G Jenkins, M D	City health officer
Texarkana	William Hibbitts, M D	City phpsician.
Tyler	Albert Woldert, M D	City health officer.
Waco	T E Tabb, M D	Do
Utah		
Logan	P W Eliason, M D	City physician
Ogden	N H Savage, M D	Health commissioner.
Provo	Arnold E Robison, M. D	City physician
Salt Lake City	Willard Christopherson, M D	Health commissioner.
Vermont		
Barre	M D Lamb, M D	Health officer
Burlington	*James W. Courtney, M D	Do
Rutland	Levi Rustedt, M D	Do
Virginia		
Alexandria	*Louis E Foulks, M. D	Do
Charlottesville	*George Bright Young, M D	Do
Danville	*R W Garnett, M D	Do
Lynchburg	*Mosby G Perrow, Ph. D	Director of public welfare.
Newport News	Samuel Downing, M D	Acting health officer
Norfolk	*Powhatan S Schenck, M D	Health commissioner
Petersburg	Robert A Martin, M D	Health officer.
Portsmouth	*Lonsdale J Roper, M. D	Director of public welfare.
Richmond	*W Brownley Foster, M. D	Do
Roanoke	*Coleman B. Ransone, M D	Health officer
Suffolk	*Clarence Francis Moriarty, M D.	Director joint health department.

City	Name of health officer	Official title
Washington		
Aberdeen	Arthur Skarperud, M D	City health officer
Bellingham	W H Ballaine M D	Health officer
Bremerton	T H Holmes, M D	City health officer
Everett	J Spencer Purdy, M D	Health officer
Hoquiam	Harry C Watkins, M D	Do
Seattle	*E T Hanley, M D	Commissioner of health
Spokane	*Ralph Hendricks, M D	Health officer
Tacoma	C F Engels, M D	Do
Vancouver	R D Wiswall, M D	City physician
Walla Walla	*Oliver J Morehead, M D	City and county health officer.
Yakima	*H H Smith M D	Do
West Virginia		
Bluefield	*David B Lepper, M D	City health officer
Charleston	J B Lohan, M D	Health commissioner
Clarksburg	*R L Osborn, M D	City physician
Fairmont	*J A Jamison, M D	City health officer
Huntington	J E Rader, M D	Health officer
Martinsburg	Clifford Sparrow M D	Do
Morgantown	R H Edmondson, M D	City health officer
Moundsville	*Charles Calhoun Hedges, M D	Do
Parkersburg	Horace D Price, M D	Do
Wheeling	*W H McLain, M D	City and county health commissioner.
Wisconsin		
Appleton	William C Felton, M D	City physician
Beloit	*L M Field, M D	Health officer
Eau Claire	J F Fair, M D	Executive officer
Fond du Lac	A C Dana, M D	Health officer
Green Bay	*T J Oliver, M D	Commissioner of health
Janesville	Fred B Welch, M D	City health officer
Kenosha	*G Windesheim, M D	Director of health
La Crosse	Anthony M Murphy	Acting health commissioner.
Madison	*Alexander M Carr, M D	Health officer
Manitowoc	Max Strehle, M D	Commissioner of health
Marinette	S Bergland, M D	Health officer
Milwaukee	*John P Koehler, M D	Commissioner of health
Oshkosh	*A H Broche, M D	Health officer
Racine	*W W Bauer, M D	Do
Sheboygan	*Joseph C Elfers, M D	Commissioner of public health
Stevens Point	F A Southwick, M D	Health officer
Superior	P G McGill, M D	Health commissioner
Waukesha	Frank Murray Scheele, M D	Do
Wausau	*L F Bugbee	Health officer
West Allis	*S C McCorkle, M D	Health commissioner
Wyoming		
Casper	*H Gaist, M D, Ph G	Director of health department
Cheyenne	J H Conway, M D	County and city health officer.

TREATMENT OF INFANTILE PARALYSIS BY THE USE OF IMMUNE SERUM

The weekly Bulletin of the Department of Health of the City of Syracuse, N. Y, for July 24, 1926, gives an account of the appearance of nine cases of infantile paralysis during the month of July, 1926. The following is taken from the report of the treatment of this disease as given in the Bulletin

As soon as reports of the disease began to come in, arrangements were made for the usual diagnostic service. No immune serum was available at the time, but a small supply was immediately obtained through the courtesy of the State health department laboratories so that no case so far has suffered because of lack of serum An appeal was also made to the victims of this disease in the last two outbreaks—1924 and 1922—to give some of their immune serum blood Nurses of the department were sent to interview them personally As a result, a quantity of serum has been obtained and is now available It is hoped that further supplies may be obtained as needed.

ACUTE STAGE SYMPTOMS

It can not be overemphasized that parents and physicians must be on the lookout for the early symptoms of the disease. The onset is very much like that of any other infection A child previously well develops fever, headache, constipation, and vomiting Within some hours there may be some nervous irritability, tremor sweating about the face, retention of urine, stiffness and pain in the neck region, and perhaps also pain and tenderness in the limbs. The patient has an anxious look, much like that of an animal at bay. The fever tends to continue for three or four days, and then paralysis of groups of muscles supervenes. Lumbar puncture in the early stages usually gives a clear or slightly opalescent fluid under increased pressure, with an increased cell count and a positive globulin test.

TREATMENT OF THE DISEASE

The most important phase of the treatment is rest from the very beginning. The only possible specific treatment in the early preparalytic stage is the use of human immune poliomyelitis serum. This is injected intraspinally in amounts depending upon the amount of spinal fluid withdrawn by lumbar puncture. The intraspinal injection should be followed preferably with intravenous or intramuscular injections of amounts varying from 40 to 80 cc. In the outbreak of 1924, 35 cases were given human immune serum in the early stages of the disease, and only 4 were frankly paralyzed, while 3 showed transient weakness This means that 4 out of 5 in this group escaped paralysis, where ordinarily only about one-half the cases are expected to escape paralysis

After paralysis has set in, the most important thing is to leave the paralyzed muscles alone until every vestige of tenderness has entirely disappeared. The limb should be kept warm and at rest. No manipulation and no rubbing should be resorted to It is very difficult at this time to get the anxious parents to realize that this sort of treatment is the best for the recovery of the paralyzed muscles. After all pain and tenderness are gone, then, and only then, can muscle training and other forms of manipulation be resorted to with safety. For this stage of the disease orthopedic advice will be available as in former years.

A CLINIC FOR WHOOPING COUGH

Dr. Herman G. Weiskotten, Commissioner of Health for the City of Syracuse, N. Y., announces the opening of a clinic for whooping cough, the object of which will be to study and treat cases of this disease.

Already a gratifying response is manifest and many cases are undergoing treatment Facilities for laboratory diagnosis are provided in order that the disease may be recognized early

For purposes of study, cases are divided into (1) contacts who have not yet developed whooping cough. These will be given a prophylactic dose of vaccine Three injections will be given at intervals of three or four days (2) The second group is composed of early cases with a cough but without the typical whoop or paroxysmal cough In these cases the history of exposure and the examination of blood or sputum cultures should help to make a positive diagnosis. (3) The final group is made up of cases in which the cough is typically paroxysmal and there is no doubt as to the diagnosis In these cases an effort will be made to determine whether the disease can be shortened or the suffering ameliorated.

The reporting of whooping cough is stated to be far from complete.

PATIENTS IN HOSPITALS FOR MENTAL DISEASES, APRIL, 1926

Reports for the month of April, 1926, from 98 institutions for the care of persons suffering from mental diseases, located in 27 States, have been received by the Public Health Service A summary of these reports is given in the table below

The increase in total number of patients on the books during the month was 0.28 per cent. The increase in the number of patients in hospitals was 0.18 per cent, and in the number of patients on parole, 1.5 per cent.

Institutions having an aggregate of 9,778 patients did not report any of their inmates on parole Omitting these institutions, 8.6 per cent of the total number of patients were on parole April 30, 1926.

Omitting two institutions which care for male patients exclusively (420 patients), 51 3 per cent of the patients were males and 48.7 per cent were females.

Seventy-nine per cent of the patients admitted during the month were reported as first admissions, 14 7 per cent as readmissions, and 6 per cent were transferred from other institutions. Ten admissions (0.3 per cent) were not accounted for.

Thirty and four-tenths per cent of the patients discharged were reported as recovered, 48.1 per cent as improved, 14.2 per cent as unimproved, 4 4 per cent as without psychosis, and 2 9 per cent as otherwise discharged or not accounted for

The figures showing the number of transfers are incomplete, as transfers were made to and from hospitals from which reports were not received. It is possible that some patients were recorded as

transferred who came from institutions which do not care for mentally diseased persons

During the month 1,266 patients died, including patients who were on parole at the time of death This was 0 9 per cent of the average number of patients.

Patients on books Apr 1, 1926	
In hospitals	125, 926
On parole or otherwise absent but still on books	10, 759
Total	136, 685
Admitted during month	
First admissions	2, 430
Readmissions	451
Transferred from other hospitals in same State	186
Not accounted for	10
Total admitted during month	3, 077
Total on books during month	139, 762
Discharged during month·	
As recovered	385
As improved	610
As unimproved	180
As without psychosis	56
Otherwise discharged	18
Not accounted for	19
Total discharged during month	1, 268
Transferred to other hospitals in same State	162
Died during month	1, 266
Total discharged, transferred, and died (month)	2, 696
Patients on books Apr 30, 1926	
In hospitals	126, 147
On parole or otherwise absent but still on books	10, 919
Total	137, 066
Males	70, 525
Females	66, 541

PUBLIC HEALTH ENGINEERING ABSTRACTS

Some Notes on Mice and Bubonic Plague in Australia. Dr. F McCallum, Quarantine Officer, Commonwealth Department of Health *Health*, of the Commonwealth of Australia, Vol. 3, No. 6, November, 1925, pp. 175–177. (Abstract by H. N Old.)

While the house mouse, *Mus musculus*, has been found, under laboratory conditions, to show a relatively high susceptibility to infection with *Bacillus pestis*, the rather limited investigations conducted to establish a possible relation of mouse to bubonic plague

have resulted negatively The writer, however, feels that, in view of the swarms of mice which spread widely across the countryside at recurrent periods and particularly following in the wake of the harvesting of a successful wheat crop, the relationship of the mouse to bubonic plague, and possibly to other diseases of man, merits further investigation

Reference is made to the findings of several research workers who have conducted investigations along the line of mouse transmission of plague.

Mosquito Species Control of Malaria. Samuel T. Darling. *American Journal of Tropical Medicine*, Vol. 6, No. 3, May, 1926, pp 167–179 (Abstract by William Ropes.)

A study of malaria incidence in the rice fields and fish ponds of Java is presented, the author having been called in consultation because of the severity of the malaria and because the rice culture was so necessary and widespread control seemed at least financially impracticable. Spleen examinations showed a malaria infection of from 75 to 100 per cent, even among adults, and the population was proportionally poor, wretched, and "in a deplorable condition from malarial anemia." A careful survey of the anopheline mosquitoes revealed the fact that the breeding of the most dangerous species was not so widespread as might have been supposed, occurring principally in neglected rice fields, disused fish ponds, and ditches choked by vegetation. New rules were made governing the cultivation of rice and the breeding of fish, and the ditches were cleaned by the authorities As a result of the decrease in malaria-carrying mosquitoes, malaria has decreased, mortality rates are lower, and "a considerable improvement has been brought about with regard to the prosperity of the population" In his summary, Doctor Darling observes: "Every malarial problem should be defined first by field studies, for the breeding areas may be small and relatively easy to control."

DEATHS DURING WEEK ENDED JULY 31, 1926

Summary of information received by telegraph from industrial insurance companies for week ended July 31, 1926, and corresponding week of 1925 (From the Weekly Health Index, August 4, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended July 31, 1926	Corresponding week, 1925
Policies in force	64, 754, 649	60, 664, 778
Number of death claims	11, 362	9, 653
Death claims per 1,000 policies in force, annual rate	9.1	8.3

Deaths from all causes in certain large cities of the United States during the week ended July 31, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, August 4, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended July 31, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended July 31, 1926 [2]
	Total deaths	Death rate [1]		Week ended July 31, 1926	Corresponding week, 1925	
Total (66 cities)	6,070	10.9	10.5	700	749	[3] 54
Akron	33			4	1	43
Albany [4]	26	11.4	9.7	1	1	21
Atlanta	75			9	5	
White	41			5		
Colored	34	(5)		4		
Baltimore [4]	225	14.5	14.3	24	38	70
White	163			14		50
Colored	62	(5)		10		162
Birmingham	56	13.8	12.4	6	6	
Boston	196	13.0	11.9	26	27	73
Bridgeport	22			2	2	34
Buffalo	125	12.0	10.7	15	16	63
Cambridge	23	9.8	9.6	4	1	66
Camden	35	13.9	8.9	9	7	152
Canton	20	9.5	8.8	2	1	44
Chicago [4]	540	9.2	8.8	48	65	42
Cincinnati	128	16.2	11.8	16	14	100
Cleveland	147	8.0	8.1	22	18	57
Columbus	84	15.4	10.8	9	9	83
Dallas	56	14.6	15.9	14	13	
White	43			12		
Colored	13	(5)		2		
Dayton	44	13.0	10.6	3	3	47
Denver	65	11.9	13.4	5	16	
Des Moines	29	10.4	7.4	3	0	50
Detroit	212	8.6	8.8	26	31	42
Duluth	15	6.9	7.5	0	1	0
El Paso	36	17.2	13.4	12	7	
Erie	25			5	2	95
Fall River [4]	23	9.2	7.7	2	0	29
Flint	13	4.9	5.6	1	2	17
Fort Worth	22	7.2	6.8	2	1	
White	18			2		
Colored	4	(5)		0		
Grand Rapids	28	9.4	9.5	6	1	87
Houston	48			1	8	
White	36			1		
Colored	12	(5)		0		
Indianapolis	93	13.2	13.2	11	11	81
White	75			6		51
Colored	18	(5)		5		275
Jersey City	52	8.5	8.1	3	7	21
Kansas City, Kans	29	12.9	11.2	5	1	87
White	23			5		105
Colored	6	(5)		0		0
Kansas City, Mo	87	12.1	12.2	16	18	
Los Angeles	221			22	26	61
Louisville	93	15.6	13.8	13	12	112
White	67			10		100
Colored	26	(5)		3		188
Lowell	22			1	1	19
Lynn	8	4.0	7.6	1	0	25
Memphis	57	16.8	20.9	9	8	
White	30			3		
Colored	27	(5)		6		
Milwaukee	102	10.3	9.5	22	18	102
Minneapolis	88	10.6	6.7	9	4	50
Nashville [4]	64	24.4	24.1	8	5	
White	35			2		
Colored	29	(5)		6		

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births Cities left blank are not in the registration area for births

[3] Data for 64 cities

[4] Deaths for week ended Friday, July 30, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta 31, Baltimore 15, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Kansas City, Kans , 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D C , 25.

Deaths from all causes in certain large cities of the United States during the week ended July 31, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, August 4, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended July 31, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended July 31, 1926
	Total deaths	Death rate		Week ended July 31, 1926	Corresponding week, 1925	
New Bedford	21			5	4	87
New Haven	32	9.2	8.7	3	4	41
New Orleans	121	15.1	19.5	13	19	
White	63			4		
Colored	58	[5]		9		
New York	1,155	10.2	9.8	119	151	48
Bronx Borough	160	9.3	7.4	12	16	40
Brooklyn Borough	358	8.3	9.8	44	60	45
Manhattan Borough	494	13.7	11.6	54	61	60
Queens Borough	98	6.7	7.0	6	10	27
Richmond Borough	45	16.4	15.1	3	4	53
Newark, N. J.	77	8.7	10.3	9	21	43
Norfolk	40	12.0	11.4	8	3	149
White	22			5		149
Colored	18	[5]		3		149
Oakland	50	10.0	9.0	4	5	46
Oklahoma City	24			2	0	
Omaha	54	13.1	11.8	3	5	31
Paterson	23	8.4	10.7	1	4	17
Philadelphia	461	12.0	9.2	47	35	62
Pittsburgh	138	11.3	12.4	15	23	50
Portland, Oreg.	57			3	2	31
Providence	54	10.2	9.5	8	7	66
Richmond	42	11.6	13.1	13	9	163
White	24			4		78
Colored	18	[5]		9		315
Rochester	63	10.2	11.7	7	11	56
St. Louis	209	13.1	11.6	23	22	
St. Paul	37	7.8	10.8	1	4	9
Salt Lake City [4]	15	5.9	8.0	1	0	14
San Antonio	64	16.3	16.3	16	10	
San Diego	30	14.2	18.7	2	1	42
San Francisco	111	10.2	12.8	8	6	48
Schenectady	8	4.5	8.4	0	0	0
Seattle	56			3	4	28
Somerville	17	8.9	4.2	2	0	52
Spokane	33	15.8	12.0	3	0	70
Springfield, Mass.	33	11.9	9.9	3	5	43
Syracuse	36	10.2	8.6	2	3	25
Tacoma	21	10.3	8.5	1	1	23
Toledo	68	12.1	9.6	5	6	48
Trenton	36	14.0	11.8	2	3	33
Utica	26	13.2	10.3	4	4	88
Washington, D. C.	84	8.3	16.0	10	14	57
White	54			6		50
Colored	30	[5]		4		73
Waterbury	20			2	2	43
Wilmington, Del.	24	10.1	7.7	4	2	94
Worcester	46	12.4	10.7	2	3	23
Yonkers	15	6.7	8.7	2	2	45
Youngstown	26	8.2	8.2	6	4	76

See footnotes 4 and 5, on p. 1729.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended August 7, 1926

ALABAMA	Cases
Cerebrospinal meningitis	1
Chicken pox	2
Dengue	1
Diphtheria	7
Influenza	12
Malaria	77
Measles	21
Mumps	6
Ophthalmia neonatorum	1
Pellagra	13
Pneumonia	21
Scarlet fever	11
Smallpox	4
Tuberculosis	35
Typhoid fever	112
Whooping cough	12

ARIZONA	Cases
Diphtheria	3
Measles	1
Poliomyelitis	1
Tuberculosis	13
Typhoid fever	3

ARKANSAS	Cases
Chicken pox	7
Hookworm disease	7
Influenza	12
Malaria	153
Measles	7
Mumps	12
Pellagra	25
Poliomyelitis	1
Scarlet fever	1
Smallpox	16
Trachoma	3
Tuberculosis	13
Typhoid fever	51
Whooping cough	53

CALIFORNIA	Cases
Cerebrospinal meningitis	
Alameda County	1
Los Angeles County	1
Stockton	2
Chicken pox	28
Diphtheria	80
Influenza	11
Leprosy—Sacramento	1
Lethargic encephalitis	
Ferndale	1
Santa Ana	1
Measles	112
Mumps	37
Poliomyelitis	
Glendora	1
Los Angeles	2
San Bernardino County	1
San Diego County	1
Scarlet fever	48
Smallpox	8
Tuberculosis	197
Typhoid fever	27
Whooping cough	37

COLORADO	Cases
Chicken pox	3
Diphtheria	12
German measles	2
Influenza	1
Measles	19
Mumps	1
Poliomyelitis	1
Scabies	1
Scarlet fever	4
Smallpox	1
Tuberculosis	98
Typhoid fever	11
Vincent's angina	4
Whooping cough	10

CONNECTICUT

	Cases
Chicken pox	12
Diphtheria	16
German measles	2
Influenza	5
Measles	28
Pneumonia (broncho)	6
Pneumonia (lobar)	7
Poliomyelitis	1
Scarlet fever	15
Septic sore throat	2
Tuberculosis (all forms)	29
Typhoid fever	7
Whooping cough	20

DELAWARE

Diphtheria	4
Scarlet fever	5
Tuberculosis	12
Typhoid fever	1
Whooping cough	7

FLORIDA

Cerebrospinal meningitis	1
Dengue	1
Diphtheria	17
Influenza	55
Malaria	14
Measles	15
Mumps	3
Pneumonia	82
Scarlet fever	7
Smallpox	15
Tetanus	7
Tuberculosis	93
Typhoid fever	34
Whooping cough	19

GEORGIA

Cerebrospinal meningitis	1
Chicken pox	5
Conjunctivitis (acute)	1
Diphtheria	6
Dysentery	13
Hookworm disease	2
Influenza	5
Malaria	64
Measles	6
Mumps	7
Pellagra	11
Pneumonia	8
Scarlet fever	1
Septic sore throat	1
Smallpox	1
Tetanus	1
Tuberculosis	20
Typhoid fever	50
Whooping cough	10

IDAHO

Diphtheria	1
Scarlet fever	3
Typhoid fever	3
Whooping cough	1

ILLINOIS

	Cases
Cerebrospinal meningitis—Cook County	1
Chicken pox	69
Diphtheria	42
Influenza	39
Lethargic encephalitis—Cook County	1
Measles	163
Mumps	21
Pneumonia	133
Scarlet fever	95
Smallpox	8
Tuberculosis	400
Typhoid fever	45
Whooping cough	187

INDIANA

Chicken pox	6
Diphtheria	12
Influenza	4
Measles	25
Pneumonia	4
Scarlet fever	25
Smallpox	38
Trachoma	1
Tuberculosis	45
Typhoid fever	24
Whooping cough	87

IOWA

Diphtheria	10
German measles	1
Measles	10
Mumps	1
Poliomyelitis	1
Scarlet fever	17
Smallpox	11
Tuberculosis	7
Typhoid fever	1
Whooping cough	9

KANSAS

Cerebrospinal meningitis	
Elk City	1
Goodland	1
Hutchinson	1
Chicken pox	5
Diphtheria	14
Dysentery	1
German measles	2
Influenza	2
Measles	31
Mumps	3
Pneumonia	2
Poliomyelitis	
Hutchinson	1
Phillipsburg	1
Scarlet fever	12
Smallpox	3
Tetanus	1
Tuberculosis	42
Typhoid fever	28
Whooping cough	64

LOUISIANA

	Cases
Diphtheria	15
Influenza	6
Malaria	30
Pneumonia	18
Scarlet fever	2
Smallpox	5
Tuberculosis	63
Typhoid fever	24
Whooping cough	5

MAINE

Chicken pox	4
Diphtheria	1
Measles	42
Mumps	1
Pneumonia	3
Scarlet fever	11
Smallpox	12
Tuberculosis	23
Typhoid fever	1
Whooping cough	32

MARYLAND [1]

Chicken pox	12
Diphtheria	11
Dysentery	14
Impetigo contagiosa	5
Influenza	1
Lethargic encephalitis	1
Malaria	3
Measles	28
Mumps	9
Ophthalmia neonatorum	1
Paratyphoid fever	7
Pneumonia (broncho)	8
Pneumonia (lobar)	6
Poliomyelitis	2
Scabies	4
Scarlet fever	8
Septic sore throat	1
Tetanus	1
Trachoma	1
Tuberculosis	61
Typhoid fever	27
Vincent's angina	2
Whooping cough	97

MASSACHUSETTS

Cerebrospinal meningitis	1
Chicken pox	31
Diphtheria	24
Dysentery	1
German measles	6
Influenza	3
Lethargic encephalitis	2
Malaria	3
Measles	44
Mumps	37
Ophthalmia neonatorum	6
Pellagra	2
Pneumonia (lobar)	19
Poliomyelitis	10
Scarlet fever	58
Septic sore throat	2

[1] Week ended Friday

MASSACHUSETTS—continued

	Cases
Trachoma	1
Tuberculosis (pulmonary)	112
Tuberculosis (other forms)	31
Typhoid fever	17
Whooping cough	92

MICHIGAN

Diphtheria	76
Measles	93
Pneumonia	23
Scarlet fever	77
Smallpox	9
Tuberculosis	55
Typhoid fever	14
Whooping cough	177

MINNESOTA

Chicken pox	18
Diphtheria	23
Influenza	2
Measles	34
Pneumonia	2
Poliomyelitis	1
Scarlet fever	63
Smallpox	1
Tuberculosis	55
Typhoid fever	10
Whooping cough	37

MISSISSIPPI

Diphtheria	9
Scarlet fever	2
Smallpox	2
Typhoid fever	64

MISSOURI

(Exclusive of Kansas City)

Cerebrospinal meningitis	1
Chicken pox	4
Diphtheria	14
Malaria	5
Measles	16
Mumps	3
Poliomyelitis	1
Scarlet fever	10
Smallpox	10
Tetanus	1
Trachoma	16
Tuberculosis	32
Typhoid fever	23
Whooping cough	69

MONTANA

Chicken pox	6
German measles	1
Measles	2
Poliomyelitis	1
Rocky Mountain spotted fever—Cartersville	1
Scarlet fever	7
Septic sore throat	1
Smallpox	12
Tuberculosis	2
Typhoid fever	9
Whooping cough	7

NEBRASKA

	Cases
Cerebrospinal meningitis	1
Chicken pox	9
Diphtheria	4
Measles	2
Mumps	2
Scarlet fever	7
Septic sore throat	1
Tetanus	1
Tuberculosis	7
Typhoid fever	3
Whooping cough	17

NEW JERSEY

Anthrax	1
Cerebrospinal meningitis	1
Chicken pox	26
Diphtheria	24
Influenza	2
Malaria	1
Measles	91
Paratyphoid fever	1
Pneumonia	25
Poliomyelitis	2
Scarlet fever	30
Smallpox	1
Typhoid fever	7
Whooping cough	107

NEW MEXICO

Chicken pox	2
Diphtheria	2
Dysentery	2
Mumps	1
Pellagra	1
Pneumonia	2
Rabies (in animals)	1
Scarlet fever	1
Tuberculosis	24
Typhoid fever	5
Whooping cough	6

NEW YORK

(Exclusive of New York City)

Chicken pox	72
Diphtheria	78
German measles	33
Lethargic encephalitis	2
Malaria	4
Measles	359
Mumps	51
Ophthalmia neonatorum	1
Paratyphoid fever	2
Pneumonia	62
Poliomyelitis	13
Rabies	1
Scarlet fever	49
Septic sore throat	1
Smallpox	9
Tetanus	2
Trachoma	1
Typhoid fever	25
Vincent's angina	18
Whooping cough	255

[2] Deaths.

NORTH CAROLINA

	Cases
Chicken pox	6
Diphtheria	23
Dysentery (bacillary)	1
German measles	6
Measles	47
Poliomyelitis	11
Scarlet fever	19
Septic sore throat	1
Smallpox	56
Typhoid fever	51
Whooping cough	236

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Cerebrospinal meningitis—Washita County	1
Chicken pox	3
Diphtheria	5
Influenza	12
Malaria	40
Measles	9
Pellagra	13
Pneumonia	4
Scarlet fever	7
Smallpox	1
Typhoid fever	104
Whooping cough	25

OREGON

Chicken pox	4
Diphtheria	14
Influenza	8
Measles	15
Mumps	7
Pellagra	1
Pneumonia	[2] 2
Scarlet fever	18
Septic sore throat	7
Smallpox	11
Tuberculosis	6
Typhoid fever	12
Whooping cough	8

PENNSYLVANIA

Cerebrospinal meningitis	2
Chicken pox	64
Diphtheria	96
German measles	6
Lethargic encephalitis—Allentown	1
Measles	280
Mumps	5
Ophthalmia neonatorum	
Philadelphia	6
Pittsburgh	1
Pneumonia	23
Poliomyelitis—Philadelphia	2
Scabies	1
Scarlet fever	105
Smallpox	1
Tetanus	
Brown Township [3]	1
Philadelphia	2
York	1
Tuberculosis	102
Typhoid fever	24
Whooping cough	323

[3] County not specified.

RHODE ISLAND

	Cases
Cerebrospinal meningitis	1
Diphtheria	2
German measles	2
Malaria	4
Measles	6
Tuberculosis	14
Typhoid fever	1
Whooping cough	17

SOUTH DAKOTA

	Cases
Cerebrospinal meningitis	1
Chicken pox	2
Diphtheria	5
Measles	40
Poliomyelitis	1
Scarlet fever	32
Smallpox	1
Tuberculosis	3
Typhoid fever	2
Whooping cough	7

TENNESSEE

	Cases
Cerebrospinal meningitis—Memphis	1
Chicken pox	9
Diphtheria	7
Influenza	3
Malaria	39
Measles	11
Ophthalmia neonatorum	2
Pellagra	11
Poliomyelitis	
Chattanooga	1
Memphis	1
Scarlet fever	10
Smallpox	1
Tuberculosis	36
Typhoid fever	139
Whooping cough	29

TEXAS

	Cases
Chicken pox	13
Diphtheria	9
Dysentery	3
Glanders	2
Influenza	30
Measles	11
Mumps	3
Paratyphoid fever	10
Pellagra	2
Pneumonia	1
Rabies (human)	1
Scarlet fever	14
Smallpox	19
Tuberculosis	17
Typhoid fever	48
Typhus fever	1
Whooping cough	13

UTAH

	Cases
Cerebrospinal meningitis	
Brigham	2
Salt Lake City	1
Chicken pox	12
Diphtheria	9
Measles	13
Mumps	8
Pneumonia	4
Scarlet fever	3
Typhoid fever	4

VERMONT

	Cases
Chicken pox	5
Diphtheria	2
Measles	4
Mumps	2
Scarlet fever	1
Whooping cough	21

WASHINGTON

	Cases
Cerebrospinal meningitis	
Clarke County	1
Columbia County	1
Chicken pox	9
Diphtheria	18
German measles	2
Measles	21
Mumps	7
Scarlet fever	23
Smallpox	14
Tuberculosis	19
Typhoid fever	11
Whooping cough	28

WEST VIRGINIA

	Cases
Cerebrospinal meningitis	
Lewis County	1
Logan County	1
Chicken pox	2
Diphtheria	11
Measles	37
Scarlet fever	19
Smallpox	4
Tuberculosis	38
Typhoid fever	21
Whooping cough	55

WISCONSIN

	Cases
Milwaukee	
Cerebrospinal meningitis	1
Chicken pox	12
Diphtheria	15
Measles	25
Mumps	8
Pneumonia	7
Poliomyelitis	1
Scarlet fever	5
Whooping cough	85
Scattering	
Cerebrospinal meningitis	1
Chicken pox	14
Diphtheria	7
German measles	8
Influenza	8
Measles	247
Mumps	14
Pneumonia	4
Scarlet fever	28
Tuberculosis	27
Typhoid fever	3
Whooping cough	96

WYOMING

	Cases
Measles	3
Rocky Mountain spotted fever	
Albany County	1
Carbon County	1
Park County	2
Sheridan County	4
Scarlet fever	3
Tuberculosis (pulmonary)	1
Typhoid fever	1
Whooping cough	11

Reports for Week Ended July 31, 1926

COLORADO	Cases
Chicken pox	5
Diphtheria	3
Influenza	1
Malaria	2
Measles	20
Mumps	2
Scarlet fever	6
Smallpox	6
Tuberculosis	48
Typhoid fever	8
Vincent's angina	3
Whooping cough	18

DISTRICT OF COLUMBIA	Cases
Chicken pox	6
Diphtheria	3
Measles	6
Pneumonia	9
Scarlet fever	4
Tuberculosis	21
Typhoid fever	2
Whooping cough	20

NORTH DAKOTA	Cases
Diphtheria	1
German measles	2
Measles	23
Pneumonia	1
Scarlet fever	27
Smallpox	2
Trachoma	2
Tuberculosis	6
Typhoid fever	7
Whooping cough	30

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Chicken pox	2
Diphtheria	6
Influenza	24
Malaria	104
Measles	8
Mumps	1
Pellagra	15
Pneumonia	6
Poliomyelitis—Caddo County	1
Rabies	1
Scarlet fever	6
Smallpox	1
Typhoid fever	96
Whooping cough	53

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
June, 1926										
California	17	503	48	6	2,150	8	16	608	103	111
Colorado	0	64	9	3	257		1	100	10	27
Delaware		6		2	92		0	17	0	3
Hawaii Territory	1	13	22		35		0	0	0	12
Kansas	4	31	45	2	783	1	3	107	29	34

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended July 24, 1926, 36 States reported 833 cases of diphtheria. For the week ended July 25, 1925, the same States reported 720 cases of this disease Ninety-seven cities, situated in all parts of the country and having an aggregate population of more than 29,560,000, reported 518 cases of diphtheria for the week ended July 24, 1926. Last year for the corresponding week they reported 419 cases. The estimated expectancy for these cities was 557 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-three States reported 2,750 cases of measles for the week ended July 24, 1926, and 957 cases of this disease for the

week ended July 25, 1925. Ninety-seven cities reported 871 cases of measles for the week this year and 544 cases last year.

Poliomyelitis.—The health officers of 36 States reported 48 cases of poliomyelitis for the week ended July 24, 1926. The same States reported 179 cases for the week ended July 25, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-six States—this year, 1,071 cases; last year, 717 cases; 97 cities—this year, 469 cases; last year, 296 cases, estimated expectancy, 273 cases.

Smallpox.—For the week ended July 24, 1926, 36 States reported 221 cases of smallpox. Last year for the corresponding week they reported 215 cases. Ninety-seven cities reported smallpox for the week as follows: 1926, 33 cases; 1925, 58 cases; estimated expectancy 51 cases. No deaths from smallpox were reported by these cities for the week this year

Typhoid fever.—Seven hundred and two cases of typhoid fever were reported for the week ended July 24, 1926, by 35 States. For the corresponding week of 1925, the same States reported 989 cases of this disease Ninety-seven cities reported 103 cases of typhoid fever for the week this year and 187 cases for the corresponding week last year The estimated expectancy for these cities was 169 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 91 cities, with a population of more than 28,875,000, as follows: 1926, 312 deaths; 1925, 267 deaths.

City reports for week ended July 24, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	0	1	1	0	0	1	0	0
New Hampshire:									
Concord	22,546	0	0	0	0	0	4	0	2
Manchester	83,097	0	1	0	0	0	2	0	0
Nashua	29,723	1	0	0	0	0	0	0	0
Vermont:									
Barre	10,008		0						
Burlington	24,089	0	0	0	0	0	5	0	0

City reports for week ended July 24, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND—continued									
Massachusetts									
Boston	779, 620	30	37	8	0	0	16	22	7
Fall River	128, 993	1	3	3	0	0	1	0	0
Springfield	142, 065	0	1	0	0	0	1	0	0
Worcester	190, 757	5	2	0	0	0	0	0	0
Rhode Island									
Pawtucket	69, 760	0	0	0	0	0	0	0	0
Providence	267, 918	0	3	1	0	0	13	0	2
Connecticut									
Bridgeport	(1)	0	4	1	0	0	1	0	0
Hartford	160, 197	0	3	0	0	0	4	0	2
New Haven	178, 927	2	1	0	0	0	5	0	1
MIDDLE ATLANTIC									
New York									
Buffalo	538, 016	3	9	11	0	0	5	1	3
New York	5, 873, 356	56	159	141	15	2	54	0	75
Rochester	316, 786	4	5	2	0	1	10	0	2
Syracuse	182, 003	3	3	6	0	0	69	4	4
New Jersey									
Camden	128, 642	2	2	1	0	0	5	0	2
Newark	452, 513	4	9	6	3	0	7	1	11
Trenton	132, 020	0	2	0	0	0	4	0	1
Pennsylvania									
Philadelphia	1, 979, 364	19	39	42	--------	1	35	4	17
Pittsburgh	631, 563	8	13	8	0	0	28	--------	14
Reading	112, 707	2	2	2	--------	0	0	0	0
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409, 333	0	6	4	0	0	29	3	3
Cleveland	936, 485	34	17	30	0	0	3	1	12
Columbus	279, 836	7	2	4	0	0	7	0	1
Toledo	287, 380	11	4	1	0	0	26	0	2
Indiana									
Fort Wayne	97, 846	0	1	0	0	0	5	0	1
Indianapolis	358, 819	3	5	0	0	0	1	0	8
South Bend	80, 091	0	0	0	0	0	9	0	2
Terre Haute	71, 071	0	0	1	0	0	1	0	0
Illinois									
Chicago	2, 995, 239	69	65	43	1	2	164	11	22
Peoria	81, 564	0	0	0	0	0	1	0	1
Springfield	63, 923	0	0	0	2	0	3	0	0
Michigan									
Detroit	1, 245, 824	14	21	48	2	2	9	2	10
Flint	130, 316	1	3	1	0	0	18	1	1
Grand Rapids	153, 698	0	3	0	0	0	3	1	2
Wisconsin									
Kenosha	50, 891	0	1	0	0	0	56	0	1
Madison	46, 385	5	0	2	0	0	3	0	0
Milwaukee	509, 192	12	10	10	2	2	87	11	6
Racine	67, 707	0	1	3	0	0	15	0	0
Superior	39, 671	0	1	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota									
Duluth	110, 502	2	1	0	0	0	16	0	2
Minneapolis	425, [illegible]	10	9	9	0	0	3	0	5
St Paul	246, 001	3	10	4	0	0	23	2	5
Iowa									
Davenport	52, 469	0	1	0	0	--------	1	0	--------
Sioux City	76, 411	0	1	1	0	--------	6	0	--------
Waterloo	36, 771	1	0	0	0	--------	24	0	--------
Missouri									
Kansas City	367, 481	0	2	1	0	0	0	0	2
St Joseph	78, 342	0	1	0	0	0	0	0	1
St Louis	821, 543	1	16	28	0	0	14	0	--------

1 No estimate made.

City reports for week ended July 24, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST NORTH CENTRAL—continued									
North Dakota									
Fargo	26,403		0	0	0	0	3		0
South Dakota									
Aberdeen	15,036	0	0	0	0		1	0	
Sioux Falls	30,127		1						
Nebraska									
Lincoln	60,941	1	0	1	0	0	1	3	1
Omaha	211,768	2	4	1	0	0	2	0	4
Kansas									
Topeka	55,411	0	1	0	0	1	0	0	0
Wichita	88,367	0	0	3	0	0	0	0	0
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	0	2	0	0	0	0	1
Maryland									
Baltimore	796,296	12	11	5	1	1	14	14	9
Cumberland	33,741	0	0	0	0	0	0	0	0
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia									
Washington	497,906	2	4	8	0	0	14	0	4
Virginia									
Lynchburg	30,395	0	0	0	0	0	1	1	0
Norfolk	(1)	0	0	0	0	0	2	0	2
Richmond	186,403	0	1	3	0	0	17	1	3
Roanoke	58,208	0	1	0	0	0	2	0	1
West Virginia									
Charleston	49,019	0	1	0	0	0	2	0	1
Huntington	63,485	0	0	0	0	1	0	0	2
Wheeling	56,208	0	0	0	0	0	4	0	0
North Carolina									
Raleigh	30,371	1	0	0	0	0	0	0	0
Wilmington	37,061	0	0	0	0	0	0	0	1
Winston-Salem	69,031	0	0	0	0	0	9	0	0
South Carolina									
Charleston	73,125	0	0	0	3	0	0	0	1
Columbia	41,225	0	1	0	0	0	0	0	0
Greenville	27,311	0	0	0	0	0	0	0	0
Georgia									
Atlanta	(1)	0	2	0	8	1	3	0	7
Brunswick	16,809	0	0	0	0	0	0	0	0
Savannah	93,134	0	1	0	1	0	0	0	1
Florida									
Miami	69,754	0		3	1	0	0	3	4
St Petersburg	26,847		0			0			0
Tampa	94,743	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	1	1	0	0	1	0	0
Louisville	305,935	0	1	1	0	0	0	0	9
Tennessee									
Memphis	174,533	0	1	0	0	0	4	0	1
Nashville	136,220	0	0	0	0	0	0	0	4
Alabama									
Birmingham	205,670	1	1	0	0	1	17	1	4
Mobile	65,955	0	0	0	0	0	0	0	1
Montgomery	46,481	0	0	0	0	0	2	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	0	0	0		1	0	
Little Rock	74,216	0	0	0	0	0	0	0	1
Louisiana									
New Orleans	414,493	0	5	1	1	2	0	0	7
Shreveport	57,857	0	1	1	0	0	0	0	0
Oklahoma									
Oklahoma City	(1)	0	0	0	0	0	0	0	6

[1] No estimate made

City reports for week ended July 24, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST SOUTH CENTRAL—continued									
Texas									
Dallas	194,450	2	2	3	0	0	2	0	2
Galveston	48,375	0	0	0	0	0	0	1	0
Houston	164,954	0	1	2	0	0	0	0	0
San Antonio	198,069	0	1	2	0	0	0	0	2
MOUNTAIN									
Montana									
Billings	17,971	0	0	0	0	0	1	1	1
Great Falls	29,883	0	1	0	0	0	4	0	0
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	0	0	1	0	0	0	0	0
Idaho									
Boise	23,042	0	0	0	0	0	0	0	0
Colorado									
Denver	280,911	5	8	3	--------	1	7	0	3
Pueblo	43,787	3	1	0	0	0	6	0	1
New Mexico									
Albuquerque	21,000	0	1	2	0	0	0	0	0
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	1
Utah									
Salt Lake City	130,948	3	2	3	0	0	1	5	2
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	3	4	9	0	--------	2	9	--------
Spokane	108,897	6	0	1	0	--------	18	0	--------
Tacoma	104,455	5	1	5	0	0	4	0	2
Oregon									
Portland	282,383	5	4	5	2	0	8	1	4
California									
Los Angeles	(1)	18	30	40	3	0	16	7	6
Sacramento	72,260	0	2	1	0	1	1	2	0
San Francisco	557,530	2	10	9	1	0	38	2	2

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine											
Portland	0	0	0	0	0	2	0	0	0	4	30
New Hampshire											
Concord	0	2	0	0	0	0	0	0	0	0	9
Manchester	0	3	0	0	0	3	0	0	0	0	25
Nashua	0	0	0	0	0	0	0	0	0	0	12
Vermont											
Barre	0	--------	0	--------	--------	--------	0	--------	--------	--------	--------
Burlington	0	0	0	0	0	0	0	0	0	2	11
Massachusetts											
Boston	16	26	0	0	0	15	2	2	0	30	199
Fall River	1	1	0	0	0	1	1	0	0	5	20
Springfield	2	1	0	0	0	5	0	0	0	3	38
Worcester	2	0	0	0	0	4	0	0	0	2	44
Rhode Island:											
Pawtucket	1	0	1	0	0	1	0	0	0	0	23
Providence	3	3	0	0	0	3	1	2	0	7	59

[1] No estimate made

City reports for week ended July 24, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND—continued											
Connecticut											
Bridgeport	2	1	0	0	0	2	0	0	0	0	30
Hartford	1	1	0	0	0	0	1	0	0	8	35
New Haven	1	1	0	0	0	0	2	0	0	0	33
MIDDLE ATLANTIC											
New York											
Buffalo	7	9	0	0	0	8	1	0	0	8	123
New York	41	86	0	0	0	[1] 101	26	14	0	73	1,231
Rochester	4	1	0	0	0	2	0	1	1	9	62
Syracuse	3	0	0	0	0	3	0	0	0	38	49
New Jersey											
Camden	1	4	0	0	0	0	1	0	0	5	16
Newark	6	10	0	0	0	5	1	0	0	40	117
Trenton	0	0	1	0	0	1	0	0	0	1	32
Pennsylvania											
Philadelphia	23	26	1	0	0	27	8	3	0	50	395
Pittsburgh	10	13	0	0	0	8	3	0	0	114	156
Reading	1	1	0	0	0	1	1	0	0	19	23
EAST NORTH CENTRAL											
Ohio											
Cincinnati	3	3	1	1	0	10	1	3	0	7	133
Cleveland	8	13	2	0	0	10	2	0	0	83	183
Columbus	2	0	0	1	0	6	1	0	0	11	83
Toledo	4	2	1	1	0	5	1	0	0	68	70
Indiana											
Fort Wayne	0	1	0	0	0	1	1	0	0	6	19
Indianapolis	2	5	1	9	0	4	2	0	0	35	83
South Bend	0	1	1	0	0	0	0	0	0	2	16
Terre Haute	1	1	0	0	0	0	0	0	0	0	12
Illinois											
Chicago	29	43	1	0	0	49	5	1	0	65	612
Peoria	1	0	0	0	0	0	0	0	0	5	20
Springfield	0	0	0	0	0	4	0	1	0	10	28
Michigan											
Detroit	25	43	3	1	0	18	5	3	2	86	281
Flint	2	7	1	6	0	1	1	0	0	4	29
Grand Rapids	2	10	0	0	0	0	0	1	0	3	28
Wisconsin											
Kenosha	2	0	2	0	0	0	0	0	0	3	10
Madison	1	6	0	0	0	0	0	0	0	1	7
Milwaukee	10	2	1	0	0	3	1	0	0	90	104
Racine	2	0	0	0	0	0	0	0	0	5	--------
Superior	1	1	1	0	0	0	0	0	0	0	6
WEST NORTH CENTRAL											
Minnesota											
Duluth	3	10	2	0	3	0	1	0	0	0	27
Minneapolis	9	16	2	0	0	3	1	1	0	2	78
St Paul	6	14	2	0	0	4	2	0	0	9	65
Iowa											
Davenport	1	0	1	0	--------	--------	0	0	--------	0	--------
Sioux City	0	2	0	5	--------	--------	0	0	--------	2	--------
Waterloo	1	1	0	0	--------	--------	0	0	--------	0	--------
Missouri											
Kansas City	2	2	1	0	0	7	2	1	1	7	86
St Joseph	0	0	0	0	0	2	1	0	0	0	20
St. Louis	6	8	1	1	0	8	6	4	2	29	216
North Dakota:											
Fargo	0	3	0	1	0	1	0	0	0	--------	4
South Dakota:											
Aberdeen	1	1	0	0	--------	--------	0	0	--------	7	--------
Sioux Falls	1	--------	0	--------	--------	--------	0	--------	--------	--------	--------
Nebraska											
Lincoln	0	0	0	0	0	0	1	1	0	6	13
Omaha	1	6	3	0	0	5	0	0	0	1	50

[1] Pulmonary tuberculosis only.

City reports for week ended July 24, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths all causes
WEST NORTH CENTRAL—con											
Kansas											
Topeka	1	1	1	0	0	0	1	0	0	14	17
Wichita	1	0	0	0	0	1	1	0	0	12	25
SOUTH ATLANTIC											
Delaware											
Wilmington	0	3	0	0	0	1	1	1	0	5	17
Maryland											
Baltimore	5	5	0	0	0	21	7	4	0	71	206
Cumberland	0	0	0	0	0	1	1	0	0	0	12
Frederick	0	0	0	0	0	0	1	0	0	2	2
District of Columbia											
Washington	4	4	0	0	0	15	4	2	0	16	147
Virginia											
Lynchburg	0	1	0	0	0	2	1	1	0	5	16
Norfolk	0	1	0	0	0	3	2	1	0	23	-------
Richmond	1	2	0	1	0	2	3	3	0	0	54
Roanoke	1	0	1	1	0	0	2	2	0	0	13
West Virginia											
Charleston	0	0	0	1	0	0	2	0	1	3	26
Huntington	0	0	0	0	0	0	1	0	0	0	11
Wheeling	1	0	0	0	0	0	1	1	0	17	19
North Carolina.											
Raleigh	0	0	1	0	0	1	1	2	0	18	19
Wilmington	0	1	0	0	0	0	0	0	0	9	10
Winston-Salem	1	2	1	0	0	0	3	1	0	0	22
South Carolina											
Charleston	0	0	0	0	0	3	2	0	0	1	27
Columbia	0	0	0	0	0	0	2	3	0	1	-------
Greenville	0	0	1	0	0	0	1	0	0	3	3
Georgia											
Atlanta	1	0	2	0	0	7	3	4	3	4	84
Brunswick	0	0	0	0	0	0	0	0	0	0	2
Savannah	0	0	0	0	0	5	2	0	0	4	25
Florida											
Miami	-------	1	-------	0	0	0	-------	0	0	11	24
St Petersburg	0	-------	0	-------	0	0	0	-------	0	-------	3
Tampa	0	0	0	0	0	3	0	0	0	1	16
EAST SOUTH CENTRAL											
Kentucky											
Covington	0	2	0	0	0	0	0	0	0	0	20
Louisville	0	4	0	0	0	5	5	3	0	6	100
Tennessee											
Memphis	0	10	1	0	0	10	5	13	4	20	77
Nashville	0	0	0	0	0	2	6	0	1	0	51
Alabama											
Birmingham	1	1	1	1	0	4	5	5	2	14	66
Mobile	0	0	0	0	0	2	1	3	3	0	17
Montgomery	0	1	0	1	0	0	2	2	0	1	16
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	0	3	0	0	-------	-------	0	0	-------	5	-------
Little Rock	0	3	0	1	0	2	3	0	0	0	5
Louisiana											
New Orleans	0	6	1	0	0	8	5	3	2	10	115
Shreveport	0	4	0	0	0	2	2	0	2	0	29
Oklahoma.											
Oklahoma City	0	0	0	0	0	4	2	3	0	0	30
Texas:											
Dallas	1	1	0	0	0	4	4	1	0	9	44
Galveston	0	0	0	1	0	1	1	0	0	0	10
Houston	0	1	0	1	0	4	2	2	0	0	31
San Antonio	0	1	0	0	0	6	1	1	0	0	60

City reports for week ending July 24, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
MOUNTAIN											
Montana											
Billings	0	0	0	0	0	1	0	3	0	2	6
Great Falls	0	1	0	1	0	1	0	0	0	0	6
Helena	0	0	0	0	0	0	0	0	0	0	4
Missoula	1	0	1	1	0	0	0	0	0	0	2
Idaho											
Boise	0	0	1	1	0	0	0	0	0	0	5
Colorado											
Denver	4	6	2	0	0	9	1	0	0	10	62
Pueblo	1	0	0	0	0	0	0	2	0	1	9
New Mexico											
Albuquerque	0	1	0	0	0	6	0	0	0	2	24
Arizona											
Phoenix	------	0	0	0	0	6	0	0	0	0	15
Utah											
Salt Lake City	1	0	1	0	0	1	1	0	0	28	29
Nevada											
Reno	0	0	0	0	0	0	0	0	0	0	6
PACIFIC											
Washington											
Seattle	3	6	3	0	------	------	0	1	------	3	------
Spokane	1	4	3	1	------	------	0	0	------	6	------
Tacoma	1	1	1	1	0	0	0	0	0	3	19
Oregon											
Portland	2	12	5	6	0	2	0	0	0	0	39
California											
Los Angeles	7	18	3	1	0	24	4	2	1	5	216
Sacramento	1	1	0	0	0	1	1	0	0	0	15
San Francisco	4	4	1	0	0	4	2	0	0	4	133

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis: Cases	Poliomyelitis: Deaths
NEW ENGLAND									
Massachusetts									
Boston	0	0	2	1	1	0	1	0	0
Fall River	0	0	0	0	1	0	0	0	0
Worcester	0	0	0	0	0	0	0	1	0
MIDDLE ATLANTIC									
New York									
Buffalo	0	0	0	0	0	0	0	3	0
New York	3	4	2	4	0	0	5	1	0
Rochester	0	0	0	2	0	0	0	0	0
Syracuse	0	0	2	0	0	0	1	7	1
New Jersey									
Newark	0	0	2	0	0	0	0	1	0
Pennsylvania									
Philadelphia	1	0	1	1	0	0	1	2	0
EAST NORTH CENTRAL									
Ohio									
Cincinnati	0	1	0	1	0	0	0	0	0
Toledo	0	0	0	1	0	0	0	0	0
Illinois									
Chicago	0	2	0	0	0	0	2	0	0
Michigan									
Detroit	0	1	1	0	0	0	0	1	1
Wisconsin									
Milwaukee	1	1	1	0	0	0	0	0	0

City reports for week ended July 24, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
WEST NORTH CENTRAL									
Missouri:									
St. Louis	3	2	0	0	0	0	0	0	0
Kansas:									
Topeka	0	0	0	1	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	1	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	0	0	0	0	0	0	1	3	0
District of Columbia:									
Washington	1	1	0	0	0	0	0	0	0
North Carolina:									
Winston-Salem	0	0	0	0	1	1	0	0	0
South Carolina:									
Charleston	0	0	0	0	3	1	0	0	0
Georgia:									
Atlanta	0	0	0	0	0	0	0	1	0
EAST SOUTH CENTRAL									
Kentucky:									
Louisville	0	0	1	0	1	0	0	0	0
Tennessee:									
Memphis	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
New Orleans	0	0	0	0	1	2	0	0	0
Shreveport	0	0	0	0	0	2	0	0	0
Texas:									
Dallas	0	0	0	0	1	1	0	2	0
San Antonio	0	0	0	1	0	0	0	0	0
MOUNTAIN									
Idaho:									
Boise	1	1	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Spokane	1	0	0	0	0	0	0	1	0
Tacoma	0	0	0	0	0	0	0	1	0
California:									
Los Angeles	1	1	1	0	1	0	1	1	0
San Francisco	0	0	0	1	0	0	0	1	1

The following table gives the rates per 100,000 population for 102 cities for the five-week period ended July 24, 1926, compared with those for a like period ended July 25, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 102 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, June 20 to July 24, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926
102 cities	112	131	[2] 90	[3] 122	93	[4] 102	76	[4] 94	75	[5] 91
New England	122	59	113	64	60	57	60	78	60	[6] 32
Middle Atlantic	163	152	95	163	126	120	96	101	90	[7] 113
East North Central	78	161	81	117	83	106	68	109	63	99
West North Central	111	195	127	[4] 125	91	[4] 93	83	[4] 107	103	[4] 95
South Atlantic	69	45	38	83	52	66	50	32	42	34
East South Central	32	10	5	[8] 22	21	5	11	21	11	10
West South Central	44	43	57	47	35	43	26	26	66	39
Mountain	102	118	176	155	102	118	120	109	111	64
Pacific	102	132	[2] 138	129	119	181	94	159	99	175

MEASLES CASE RATES

102 cities	292	617	[2] 220	[3] 435	186	[4] 303	153	[4] 215	101	[5] 154
New England	393	425	338	319	273	246	252	180	208	[6] 111
Middle Atlantic	380	476	257	313	248	211	198	129	127	[7] 99
East North Central	377	828	300	634	210	448	178	365	111	243
West North Central	59	935	30	[4] 604	34	[4] 417	28	[4] 191	18	[4] 183
South Atlantic	263	701	248	436	200	293	140	203	90	128
East South Central	121	612	89	[8] 430	110	285	71	171	58	125
West South Central	4	95	4	52	0	47	0	17	4	13
Mountain	92	792	37	437	55	264	28	191	37	173
Pacific	50	485	[2] 35	461	39	337	61	329	19	213

SCARLET FEVER CASE RATES

102 cities	113	212	[2] 93	[3] 170	87	[4] 127	58	[4] 93	55	[5] 83
New England	103	236	108	187	141	158	77	99	69	[6] 89
Middle Atlantic	99	210	79	188	81	129	45	73	42	[7] 74
East North Central	146	253	114	187	91	145	63	118	63	93
West North Central	179	354	164	[4] 270	139	[4] 205	105	[4] 185	115	[4] 127
South Atlantic	42	152	56	66	42	64	44	45	15	36
East South Central	84	17	68	[8] 66	116	52	74	52	26	93
West South Central	53	30	14	60	9	34	22	52	31	82
Mountain	203	118	102	91	148	55	83	91	157	64
Pacific	102	159	[2] 67	151	50	121	58	94	44	92

SMALLPOX CASE RATES

102 cities	24	16	[2] 14	[3] 11	16	[4] 7	14	[4] 7	10	[5] 6
New England	0	0	0	0	2	0	2	0	5	[6] 0
Middle Atlantic	0	0	1	2	0	0	1	1	0	[7] 0
East North Central	19	14	13	10	11	7	9	6	8	8
West North Central	36	44	16	[4] 26	20	[4] 28	16	[4] 26	12	[4] 14
South Atlantic	13	26	10	11	23	9	8	6	15	6
East South Central	121	88	58	[8] 39	74	0	42	5	37	10
West South Central	0	17	4	22	4	4	13	13	4	13
Mountain	28	18	28	55	18	9	18	9	0	27
Pacific	163	32	[2] 85	19	97	24	113	22	64	8

[1] The figures given in this table are rates per 100,000 population, annual basis—and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Spokane, Wash., not included.
[3] Sioux Falls, S. Dak., and Covington, Ky., not included.
[4] Sioux Falls, S. Dak., not included.
[5] Portland, Me., Barre, Vt., Trenton, N. J., Pittsburgh, Pa., and Sioux Falls, S. Dak., not included.
[6] Portland, Me., and Barre, Vt., not included.
[7] Trenton, N. J., and Pittsburgh, Pa., not included.
[8] Covington, Ky., not included.

*Summary of weekly reports from cities, June 20 to July 24, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925—*Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926
102 cities	25	12	[2] 34	[3] 17	33	[4] 13	36	[4] 22	33	[5] 18
New England	17	9	22	12	24	9	31	12	22	[6] 10
Middle Atlantic	18	10	15	11	17	7	25	11	21	[7] 10
East North Central	8	4	10	5	13	5	11	5	8	6
West North Central	10	4	20	[4] 10	42	[4] 16	42	[4] 14	38	[4] 12
South Atlantic	67	30	65	36	56	43	52	58	50	47
East South Central	84	36	184	[8] 127	163	52	205	166	163	135
West South Central	128	30	233	13	159	30	128	56	163	30
Mountain	0	0	9	27	28	0	18	0	46	46
Pacific	19	16	[2] 21	22	17	13	30	22	28	8

INFLUENZA DEATH RATES

	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926
96 cities	6	5	4	[3] 6	2	[4] 4	2	[4] 4	2	[5] 3
New England	7	0	2	5	0	7	0	0	0	[6] 0
Middle Atlantic	6	6	2	7	2	1	2	4	3	[7] 2
East North Central	6	3	5	5	2	7	3	4	1	4
West North Central	4	6	0	[4] 8	0	[4] 0	0	[4] 0	4	[4] 2
South Atlantic	2	6	6	8	0	0	4	6	4	4
East South Central	16	5	11	[8] 0	16	16	0	21	5	5
West South Central	10	24	10	14	10	5	10	9	0	9
Mountain	9	0	0	9	0	0	0	9	9	9
Pacific	4	0	4	4	0	4	4	4	0	4

PNEUMONIA DEATH RATES

	June 27, 1925	June 26, 1926	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926
96 cities	65	74	56	[3] 75	59	[4] 67	54	[4] 66	48	[5] 53
New England	58	69	46	92	43	54	48	57	50	[6] 34
Middle Atlantic	75	83	61	90	64	73	62	74	51	[7] 61
East North Central	45	61	42	61	55	65	44	46	37	46
West North Central	51	44	40	[4] 38	38	[4] 53	53	[4] 36	40	[4] 40
South Atlantic	90	94	71	88	65	71	48	54	52	58
East South Central	110	125	89	[8] 121	84	119	68	109	58	99
West South Central	73	76	58	57	58	57	73	85	63	57
Mountain	55	109	65	46	74	36	83	36	55	64
Pacific	47	43	73	43	65	53	40	46	58	35

[2] Spokane, Wash., not included
[3] Sioux Falls, S. Dak., and Covington, Ky., not included
[4] Sioux Falls, S. Dak., not included.
[5] Portland, Me., Barre, Vt., Trenton, N. J., Pittsburgh, Pa., and Sioux Falls, S. Dak., not included
[6] Portland, Me. and Barre, Vt., not included
[7] Trenton, N. J. and Pittsburgh, Pa., not included
[8] Covington, Ky., not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925, and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	102	96	29, 930, 185	30, 438, 186	29, 251, 658	29, 764, 201
New England	12	12	2, 176, 124	2, 206, 124	2, 176, 124	2, 206, 124
Middle Atlantic	10	10	10, 346, 970	10, 476, 970	10, 346, 970	10, 476, 970
East North Central	16	16	7, 481, 656	7, 655, 436	7, 481, 656	7, 655, 436
West North Central	13	11	2, 580, 151	2, 619, 719	2, 461, 380	2, 499, 036
South Atlantic	21	21	2, 716, 070	2, 776, 070	2, 716, 070	2, 776, 070
East South Central	7	7	993, 103	1, 004, 953	993, 103	1, 004, 953
West South Central	8	6	1, 184, 057	1, 212, 057	1, 078, 198	1, 103, 695
Mountain	9	9	563, 912	572, 773	563, 912	572, 773
Pacific	6	4	1, 888, 142	1, 934, 084	1, 434, 245	1, 469, 144

FOREIGN AND INSULAR

SMALLPOX ON VESSEL

Steamship "Karapara"—Zanzibar—June 7, 1926.—The steamship *Karapara* arrived, June 16, 1926, at Durban, Union of South Africa, with history of having landed a smallpox case at Zanzibar, June 7, 1926 The case occurred among Hindu deck passengers. At Durban a suspect case developed, which was removed, together with contacts, to Salisbury Island Quarantine.

THE FAR EAST

Report for week ended July 10, 1926.—The following report for the week ended July 10, 1926, was transmitted by the Far Eastern Bureau of the Health Section of the League of Nations' Secretariat, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt						
Alexandria	1	0	0	0	0	0
Iraq						
Basra	0	0	0	0	1	1
British India						
Bombay	----	0	----	0	23	16
Madras	----	0	----	0	2	2
Rangoon	----	1	----	11	1	0
Negapatam	----	0	----	3	0	0
Karachi	----	0	----	0	3	2
Straits Settlements						
Singapore	1	1	1	1	0	0
Dutch East Indies						
Cheribon	0	0	0	0	0	0

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Siam						
Bangkok	0	0	18	4	15	16
French Indo-China						
Saigon and Cholon	0	0	8	3	0	0
Haiphong	0	0	19	19	0	0
China						
Amoy	12	----	0	0	1	0
Japan						
Osaka	0	0	0	0	1	0
Yokohama	3	3	0	0	3	0
Kwantung						
Dairen	0	0	0	0	1	0
U S S R						
Vladivostok	0	0	0	0	1	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

British India—Chittagong, Cochin, Tuticorin, Vizagapatam

Federated Malay States—Port Swettenham

Straits Settlements—Penang

Dutch East Indies.—Batavia, Sourabaya, Samarang, Belawan-Deli, Palembang, Sabang, Makassar, Menado, Banjermasin, Balik-Papan, Tarakan, Pontianak

Sarawak—Kuching

British North Borneo—Sandakan, Jesselton, Kudat, Tawao

Portuguese Timor—Dilly.

Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.

French Indo-China.—Turane.
Formosa.—Keelung
China.—Shanghai, Hongkong.
Kwantung.—Port Arthur
Japan.—Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki
Korea.—Chemulpo, Fusan.
Manchuria.—Antung, Mukden, Changchun, Harbin.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island
New Guinea.—Port Moresby.
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia.—Noumea
Fiji.—Suva
Hawaii.—Honolulu

AFRICA

Egypt.—Port Said, Suez.
Anglo-Egyptian Sudan.—Port Sudan, Suakin
Eritrea.—Massaua
French Somaliland.—Jibuti.
British Somaliland.—Berbera.
Italian Somaliland.—Magadiscio.
Kenya.—Mombasa
Zanzibar.—Zanzibar
Tanganyika.—Dar-es-Salaam.
Seychelles.—Victoria
Mauritius.—Port Louis
Portuguese East Africa.—Mozambique, Beira, Lourenco Marques
Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town

Reports had not been received in time for distribution from—

British India.—Calcutta
Ceylon.—Colombo
Dutch East Indies.—Padang
Madagascar.—Tamatave, Majunga

ALGERIA

Plague—Algiers.—Under date of July 16, 1926, the occurrence of two cases of plague at Algiers was reported

CANADA

Communicable diseases—Weeks ended July 3, 10, and 17, 1926.—The Canadian Ministry of Health reports certain communicable diseases in seven Provinces of Canada for weeks ended July 3, 10, and 17, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan [1]	Alberta [2]	Total
Cerebrospinal fever				6				6
Influenza	19			4	1	1		25
Lethargic encephalitis	1			3				4
Smallpox				24	6	19	1	50
Typhoid fever	4	2	12	31	5	4	18	76

[1] No report for the week ended July 17, 1926 [2] No report for the week ended July 10, 1926

Vital statistics—Quebec—April and May, 1926.—Births and deaths in the Province of Quebec for the months of April and May, 1926, have been reported as follows:

	April	May		April	May
Estimated population	2,570,000	2,570,000	Deaths from—Continued		
Births	7,480	7,175	Heart diseases	501	440
Birth rate per 1,000 population	34.92	33.50	Influenza	670	339
Deaths (all causes)	4,249	3,557	Measles	32	77
Death rate per 1,000 population	19.83	16.60	Poliomyelitis (infantile paralysis)	1	1
Deaths under 1 year	1,150	1,036	Scarlet fever	8	15
Infant mortality rate	153.74	144.39	Syphilis	12	11
Deaths from—			Tuberculosis (pulmonary)	269	249
Cancer	144	105	Tuberculosis (other forms)	70	72
Cerebrospinal meningitis	10	14	Typhoid fever	31	33
Diabetes	26	18	Whooping cough	79	36
Diphtheria	18	38			

CUBA

Communicable diseases—Habana—April, May, and June, 1926.—During April, May, and June, 1926, communicable diseases were reported at Habana, Cuba, as follows:

APRIL

Disease	New cases	Deaths	Remaining under treatment Apr. 30, 1926	Disease	New cases	Deaths	Remaining under treatment Apr. 30, 1926
Cerebrospinal meningitis	1	1	1	Malaria[1]	41		12
Chicken pox	83		19	Measles	182	1	40
Diphtheria	11			Rabies		1	
Leprosy	1		8	Scarlet fever	15		3
				Typhoid fever[1]	32	6	20

MAY

Disease	New cases	Deaths	Remaining under treatment May 31, 1926	Disease	New cases	Deaths	Remaining under treatment May 31, 1926
Chicken pox	28		14	Measles	69	1	50
Diphtheria	13		6	Rabies	1	1	
Leprosy	2		9	Scarlet fever	13		6
Malaria[1]	44	2	12	Typhoid fever[1]	35	8	30

JUNE

Disease	New cases	Deaths	Remaining under treatment June 30, 1926	Disease	New cases	Deaths	Remaining under treatment June 30, 1926
Chicken pox	8		13	Measles	57	3	46
Diphtheria	9	1	5	Scarlet fever	27		12
Leprosy			9	Typhoid fever[1]	57	4	44
Malaria[1]	59		24				

[1] Many of these cases from the interior.

EGYPT

Plague—June 25–July 1, 1926—Summary—During the week ended July 1, 1926, 12 cases of plague were reported in Egypt, of which 1 case occurred in the city of Suez The total number of cases reported from January 1 to July 1, 1926, was 92, as compared with 78 cases reported during the corresponding period of the preceding year.

GREAT BRITAIN (SCOTLAND)

Typhus fever—Glasgow—August 3, 1926.—Under date of August 3, 1926, 7 cases of typhus fever were reported at Glasgow, Scotland.

MADAGASCAR

Plague—May 16–31, 1926—During the period May 16 to 31, 1926, 11 cases of plague with 11 deaths were reported in the island of Madagascar. Of these, one fatal case (bubonic) occurred at the port of Tamatave. Of the remaining cases occurring in the Province of Tananarive, five were bubonic and five pneumonic in type.

UNION OF SOUTH AFRICA

Plague—Cape Province—June 13–19, 1926—During the week ended June 19, 1926, three cases of plague with two deaths, occurring in the native population, were reported in the Cape Province, Union of South Africa. Of these, two cases, fatal, occurred in Calvinia district, and one case in Williston district. The occurrence was on farms

YUGOSLAVIA

Communicable diseases—April 15–June 30, 1926—During the period April 15 to June 30, 1926, communicable diseases were reported in Yugoslavia as follows:

Disease	Apr 15–30		May 1–31		June 1–30	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Anthrax	7	0	26	5	23	0
Cerebrospinal meningitis	6	5	11	6	9	5
Diphtheria and croup	62	14	105	14	56	25
Dysentery	6	0	39	3	51	2
Glanders					5	3
Lethargic encephalitis	0	0	1	1	2	2
Measles	671	9	1,006	20	548	5
Rabies	0	0	2	2	1	1
Scarlet fever	224	47	414	68	536	103
Smallpox	2	1	0	0	0	0
Tetanus	13	10	22	9	31	9
Typhoid fever	54	12	92	11	108	10
Typhus fever	5	0	20	3	13	4
Whooping cough	316	6	283	17	175	4

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended August 13, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
French Settlements in India	Apr 18-May 8	5	3	
India	May 30-June 5	1,422	938	
Rangoon	June 6-12	7	7	
Indo-China (French)				
Saigon	do	6	5	
Siam				
Bangkok	do	116	50	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported, dates of occurrence not stated
Azores				
St Michaels—				
Arrifes	June 20-26	1		
Chile				
Iquique	do		1	
China				
Amoy	June 27-July 3	8		
Nanking	do			Present
Egypt				June 25-July 1, 1926 Cases, 12; total, Jan 1-July 1, 1926 cases, 92, corresponding period, year 1925, cases, 78
Suez	June 25-July 1	1		
India				May 30-June 5, 1926 Cases, 4,665, deaths, 3,993.
Bombay	June 20-26	1		
Karachi	do	4	3	
Madras Presidency	May 30	27	16	
Rangoon	June 6-12	3	1	
Iraq				
Baghdad	June 12-26	18	14	
Java				
Batavia	June 13-19	3	3	Province
Madagascar				
Tamatave (port)	May 16-31	1	1	Bubonic
Tananarive Province				May 16-31, 1926 Cases, 11; deaths, 11 Bubonic and pneumonic
Russia	Feb 1-23	25		
Senegal	Mar 1-Apr 30	15	4	
Tunisia	May 11-31	70		
Union of South Africa				
Cape Province				June 13-19, 1926 Cases, 3, deaths, 2 On farms
Calvinia District	June 13-19	2	2	Colored On farm.
Williston District	do	1		

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	3		
Brazil				
Rio de Janeiro	June 13-19	30	19	
Canada				
Alberta	June 27-July 17	1		
Manitoba	do	6		
Ontario	do	24		
Saskatchewan	do	19		
Regina	July 4-10	2		

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended August 13, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China				
Chungking	June 20-26			Present
Manchuria—				
Changchun	June 27-July 3	1		South Manchuria Ry
Harbin	June 24-30	5		Do
Kai-yuan	do	1		Do
Liao-yuan	do	1		Do
Mukden	do	2		Do
Supingkai	do	1		
Nanking	June 20-July 3			Present
Tientsin	June 2-26		1	Reported by British municipality
Chosen				Mar 1-31, 1926 Cases, 200, deaths, 42
Egypt				
Alexandria	May 31-June 24	2	1	
Cairo	Jan 29-Feb 4	1	1	
France				Apr 1-30, 1926 Cases, 24
French Settlements in India				Apr 18-May 8, 1926 Cases, 51; deaths, 51
Gold Coast				Mar 1-31, 1926 Cases, 601; deaths, 12
Great Britain				
England and Wales				May 23-July 3, 1926 Cases, 1,068 July 4-17, 1926 Cases, 285
Newcastle-on-Tyne	July 11-17	1		
Sheffield	July 4-10	1		
Greece.				
Saloniki	June 1-14		3	
India				May 30-June 5, 1926 Cases, 6,098; deaths, 1,758
Bombay	June 13-26	42	35	
Karachi	June 20-26	1	1	
Madras	do	1		
Rangoon	June 6-12	1		
Iraq				
Baghdad	June 6-19	2	1	
Basra	June 6-28	4	4	
Italy				Apr 18-May 15, 1926 Cases, 8.
Japan				Apr 11-May 1, 1926 Cases, 9
Java				
East Java and Madoera	May 30-June 5	24	2	
Mexico				Feb 1-Mar 31, 1926 Deaths, 602
Saltillo	July 18-24		1	
Peru				
Arequipa	June 1-30		1	
Portugal				
Oporto	July 11-17	1		
Russia	Jan 1-31	513		Later than previously reported
Do	Feb 1-28	890		
Siam				
Bangkok	June 6-12	4	4	
Tunisia	May 11-31	6		
Yugoslavia	Apr 15-30	2	1	
On vessel				
S S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed Case occurred among Hindu deck passengers
Do	June 16			At Durban, Union of South Africa Suspect case landed at quarantine

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	1		
Bulgaria				Apr 1-30, 1926. Cases, 27, deaths, 2.
Chosen				Mar 1-31, 1926 Cases, 218, deaths, 29
Czechoslovakia				Apr 1-30, 1926. Cases, 37; deaths, 4.
Egypt				
Cairo	Jan. 29-Feb 4	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended August 13, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Great Britain				
Scotland—				
Glasgow	Reported Aug 3	7		
Ireland (Irish Free State)				
Cobh (Queenstown)	June 27–July 3	1	1	
Italy				May 2–8, 1926 Cases, 1
Japan				Apr 11–May 1, 1926 Cases, 9
Lithuania				Apr 1–30, 1926 Cases, 68, deaths, 8
Mexico				Feb 1–Mar 31, 1926 Deaths, 73.
Morocco				Apr 1–30, 1926 Cases, 159
Poland				May 16–22, 1926 Cases, 120, deaths 7
Russia				Jan 1–31, 1926 Cases, 1,278 Later than previously reported
Do				Feb 1–28, 1926 Cases, 5,592.
Tunisia				May 11–31, 1926 Cases, 30
Turkey				
Constantinople	June 16–22	1		
Yugoslavia	Apr 15–June 30	48	7	

Reports Received from June 26 to August 6, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18–May 1, 1926 Cases, 30, deaths, 24
China				
Shanghai	Reported July 20	35	8	
French Settlements in India				Mar 7–Apr 10 1926 Cases, 13, deaths, 13
India				Apr 25–May 29, 1926 Cases, 12,568, deaths, 7,642
Bombay	May 30–June 5	1	1	
Calcutta	Apr 4–May 29	478	418	
Do	June 13–19	46	41	
Madras	May 16–June 5	2	1	
Rangoon	May 9–June 5	23	16	
Indo-China				
Saigon	May 2–15	52	48	
Do	May 22–June 5	22	21	
Philippine Islands				
Manila	May 18–24	2	2	
Provinces—				
Albay	Apr 18–24	1	1	
Mindoro	Feb 21–27	1	1	
Romblon	Dec 14–31	42	43	
Do	Jan 2–23	16	12	
Siam				
Bangkok	May 2–June 5	1,209	686	

PLAGUE

Azores				
St Michaels—				
Arrifes	May 9–15	1		
Livramento	May 15–29	2	1	
British East Africa				
Kisumu	May 16–22	1	1	
Uganda	Mar 1–31	35	34	
Ceylon				
Colombo	May 29–June 5	1	1	

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 6, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
China				
Amoy	Apr 18-May 29		30	
Do	May 30-June 26	40		
Foochow	June 6-12			Several cases Not epidemic
Nanking	May 9-June 5			Prevalent
Ecuador				
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Egypt				Jan 1-June 10, 1926 Cases, 56
City—				
Suez	May 21-June 3	4	3	
Provinces—				
Beni-Suef	May 28-June 8	8	2	
Gharbieh	June 2	1	1	
Greece.				
Athens	Apr 1-30	7	2	Including Piraeus
Do	May 1-31	9	2	Do
Patras	May 27-June 12	4	1	
Zante	May 17	1		
India				Apr 25-May 29, 1926 Cases, 44,974, deaths, 34,840
Bombay	May 2-June 5	15	15	
Karachi	May 23-June 19	11	10	
Madras Presidency	Apr 25-May 29	69	50	
Rangoon	May 9-June 5	7	6	
Indo-China				
Saigon	May 23-June 5	3	1	
Iraq				
Baghdad	Apr 18-May 15	107	61	
Do	May 30-June 12	36	23	
Japan				
Yokohama	July 2-3	3	3	
Java				
Batavia	Apr 24-June 11	62	62	
Cheribon	Apr 11-24	3	3	
Madagascar				Apr 1-15, 1926 Cases, 42, deaths, 39 May 1-20, 1926 Cases, 20, deaths, 20
Ambositra Province	May 1-15	4	4	Septicemic
Moramanga Province	Apr 1-15	2	2	Do
Tananarive Province				Apr 1-May 15, 1926 Cases, 86, deaths, 83
Tananarive Town	Apr 1-May 15	6	6	
Other localities	do	80	77	Bubonic, pneumonic, septicemic
Nigeria				Feb 1-Mar 31, 1926 Cases, 81, deaths, 62
Peru				May, 1926 Cases, 23, deaths, 10
Departments—				
Ancash	May 1-31			Present
Cajamarca	do			Do.
Ica	do	1		
Libertad	do	4		Pacasmayo, cases, 2, Trujillo district, cases, 2
Lima	do	18	10	Lima City, 1 case, country estates, 1
Russia				Jan. 19-Feb 25, 1926 Cases, 7
Senegal				Nov 1-30, 1926 Cases, 3, deaths, 2
Siam				
Bangkok	May 23-29	1	1	
Straits Settlements,				
Singapore	May 2-8	1	1	
Tunisia				
Kairouan	June 9	3		9 cases 30 miles south of Kairouan.
Union of South Africa				
Cape Province	May 16-22	5	3	
Orange Free State—				
Hoopstad District—				
Protestpan	May 9-22	3	3	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 6, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21–June 20	11		
Bolivia				
La Paz	May 1–June 30	14	7	
Brazil				
Manaos	Apr 1–30		5	
Para	May 16–June 19	20	21	
Rio de Janeiro	May 2–June 5	102	55	
Do	June 6–12		17	
Santos	Mar 1–7		1	
British East Africa				
Tanganyika	May 2–22		12	
Uganda	Mar 1–31	1		
British South Africa				
Northern Rhodesia	May 18–24	17	6	Natives
Canada				May 30–June 12, 1926 Cases, 46
Alberta	May 30–June 12	3		
Manitoba	May 30–June 26	24		
Winnipeg	June 6–12	5	1	
Do	July 4–17	6		
Ontario				May 30–June 26, 1926 Cases, 36
Kingston	May 23–June 26	5		
Kitchener	Apr 26–May 29	3	1	
North Bay	May 2–22	5		
Orillia	Apr 26–May 29	7		
Ottawa	July 18–24	1		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
Saskatchewan				May 30–June 19, 1926 Cases, 16
Chile				
Antofagasta	June 6–12	1		
China				
Amoy	May 1–29		8	
Do	May 30–June 19	4		
Chungking	May 2–June 19			Present
Foochow	May 9–June 26			Do
Hongkong	May 2–June 12	16	9	
Manchuria—				
An-shan	May 16–June 12	9		South Manchuria Railway.
Antung	May 16–June 19	5		
Changchun	May 16–June 26	7		Do
Dairen	Apr 26–May 9	31	6	
Do	May 31–June 20	15	8	
Fushun	do	3		Do
[illegible]un	May 14–June 12	16		Do
[illegible]uan	May 16–June 26	7		Do
Kungchuling	June 13–19	1		Do
Liao-yang	May 16–June 19	3		Do
Mukden	May 16–June 12	2		Do
Penhsihu	May 16–June 19	4		Do
Supingkai	do	1		Do
Teshihchiao	do	2		Do
Wa-feng tien	do	3		Do
Nanking	May 8–June 5			Present
Shanghai	May 2–June 26	10	25	Cases foreign. Deaths, population of international concession, foreign and native
Swatow	May 9–June 26			Sporadic
Wanshien	May 1			Present among troops
Chosen				
Fusan	May 1–31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15–June 10	12	2	
Esthonia				May 1–31, 1926 Cases, 1
France				Mar 1–31, 1926 Cases, 68
St Etienne	June 9–15	2		
French Settlements in India	Mar 7–Apr 10	127	127	
Great Britain				
England—				
Bradford	May 23–29	1		
Newcastle-on-Tyne	June 6–12	1		
Nottingham	May 2–June 5	7		
Sheffield	June 13–19	1		
Guatemala				
Guatemala City	June 1–30		2	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 6, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
India				Apr 25-May 29, 1926 Cases, 34,957, deaths, 9,035
Bombay	May 2-29	114	63	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-19	8	7	
Karachi	May 16-June 19	43	17	
Madras	May 16-June 19	6	4	
Rangoon	May 9-June 5	7	3	
Indo-China				
Saigon	May 9-15	1		
Iraq				
Baghdad	May 9-June 5	4		
Basra	Apr 18-June 5	30	21	
Italy				Mar 28-Apr 17, 1926 Cases, 10
Jamaica				May 30-June 26, 1926 Cases, 99 (Reported as alastrim)
Japan				
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-21	1		Province
East Java and Madoera	Apr 11-May 29	39	3	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Latvia				Apr 1-30, 1926 Cases, 3
Mexico				
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-July 19		3	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
San Antonio de Arenales	Jan 1-June 30			Present· 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-17		5	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Nigeria				Feb 1-Mar 31, 1926 Cases, 270, deaths, 12
Poland				Mar 28-May, 1926 Cases, 12; deaths, 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Oporto	May 23-June 5	4		
Russia				Jan 1-31, 1926· Cas[illegible] [illegible]aths, 1[illegible]
Siam				
Bangkok	May 2-June 5	19	16	
Straits Settlements				
Singapore	Apr 25-May 1	1		
Tunisia				Apr 1-May 10, 1926 Cases, 6
Union of South Africa				
Cape Province—				
Idutywa District	May 23-29			Outbreaks
Natal	May 30-June 5			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg Districts
Johannesburg	May 9-June 12	5		
On vessels				Three cases, 1 death, at Aden, Arabia, stated to have been imported by sea

TYPHUS FEVER

[illegible]geria·				
Algiers	May 21-June 20	6	1	
[illegible]livia·				
La Paz	June 1-30		1	
[illegible]ile.				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Valparaiso	Apr 29-May 5		1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 6, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
China				
Antung	June 14-27	7	1	
Do	June 28-July 4	4		
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen	Feb 1-28	228	18	
Chemulpo	May 1-31	28	1	
Egypt				
Port Said	June 4-24	4	1	
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30-June 5	1		
Cork	June 5	1		
Kerry County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-Apr 17, 1926 Cases, 2
Japan				Mar 28-Apr 10, 1926 Cases, 15
Lithuania				Mar 1-31, 1926 Cases, 38, deaths, 5
Mexico				
Mexico City	May 16-June 5	20		Including municipalities in Federal District
Do	June 13-19	9		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-31, 1926 Cases, 140
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces
Jaffa District	June 15-28	5		
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-May 15, 1926 Cases, 781, deaths, 60
Rumania				Mar 1-31, 1926 Cases, 41
Russia				Jan 1-31, 1926 Cases, 2,956
Tunisia				Apr 1-May 10, 1926 Cases, 64
Tunis	June 21-30	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths, 19
Cape Province				Apr 1-May 31, 1926 Cases, 116; deaths, 15 Native
Do	May 31-June 12			Outbreaks
Grahamstown	do	1		Sporadic
Natal				Apr 1-30, 1926 Cases, 4. Native
Orange Free State				Apr 1-May 31, 1926 Cases, 15; deaths, 1
Do	June 6-12			Outbreaks
Transvaal				Apr. 1-30, 1926 Cases, 3, deaths, 3 Native
Yugoslavia				
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-29	4	3	
Do	June 6-19	4	3	

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TREASURY DEPARTMENT

PUBLIC HEALTH REPORTS

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The Influenza Epidemic in the Early Part of 1926
Reports of the Health Section, League of Nations
Infant Mortality Rates in Certain Large Cities, 1926

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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst. Surg Gen B J LLOYD, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912.

They contain. (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world (2) Articles relating to the cause, prevention, or control of disease. (3) Other pertinent information regarding sanitation and the conservation of the public health.

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PUBLIC HEALTH REPORTS

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THE INFLUENZA EPIDEMIC OF 1926

A Preliminary Note on Certain Epidemiological Indications[1]

The wave of influenza in the late winter and spring of 1926 in the United States was more than ordinarily severe when compared with the influenza outbreaks which have occurred since 1920. Measured by the excess of mortality over the corresponding period in 1925, which was not an "influenza year," the toll in lives exacted by the disease was by no means negligible In fact, were it not for the over-shadowing pandemic of 1918, which caused over 500,000 deaths in the United States alone, and the epidemic of 1920, which caused about 100,000 deaths in this country, the 1926 outbreak would have been regarded as a calamity.

TABLE 1 —*Comparison of weekly mortality rates per 1,000 population from all causes in large cities of the United States during the period December 27, 1925–May 29, 1926, with those for the corresponding period in 1924–25*

Week ended—	Rate per 1,000			Week ended—	Rate per 1,000		
	1926	Corresponding week in 1925	Excess in 1926		1926	Corresponding week in 1925	Excess in 1926
1926				1926			
Jan 2	14.4	14.3	0.1	Apr 3	17.7	14.7	3.0
Jan 9	15.6	14.6	1.0	Apr 10	17.4	14.0	3.4
Jan 16	14.9	14.2	.7	Apr 17	15.8	14.5	1.3
Jan. 23	14.9	14.2	.7	Apr 24	15.5	14.6	.9
Jan 30	14.5	14.2	.3				
				May 1	14.4	13.7	.7
Feb 6	15.2	14.4	.8	May 8	14.5	13.3	1.2
Feb 13	14.8	14.2	.6	May 15	13.4	13.2	.2
Feb 20	16.4	14.5	1.9	May 22	13.3	12.9	.4
Feb 27	16.0	13.9	2.1	May 29	12.7	12.4	.3
Mar 6	16.2	14.6	1.6				
Mar 13	17.7	15.0	2.7				
Mar 20	18.4	15.0	3.4				
Mar 27	19.4	14.8	4.6				

The data are from the current Weekly Health Index, Bureau of the Census, U S Department of Commerce

It is too early to make an accurate appraisal of the damage done by this year's influenza wave, but if we compare the mortality curve for all causes in the large cities of the United States from December 27, 1925, through May 29, 1926 (1), with the same curve for the corresponding weeks in 1924 and 1925, a very marked divergence is

[1] From the Office of Statistical Investigations, United States Public Health Service

shown, as may be seen in Table 1 and Figure 1 (A). Subtracting the 1925 rates from the 1926 rates, we obtain a series of "excess" rates and a curve that at once suggests a definite epidemic condi-

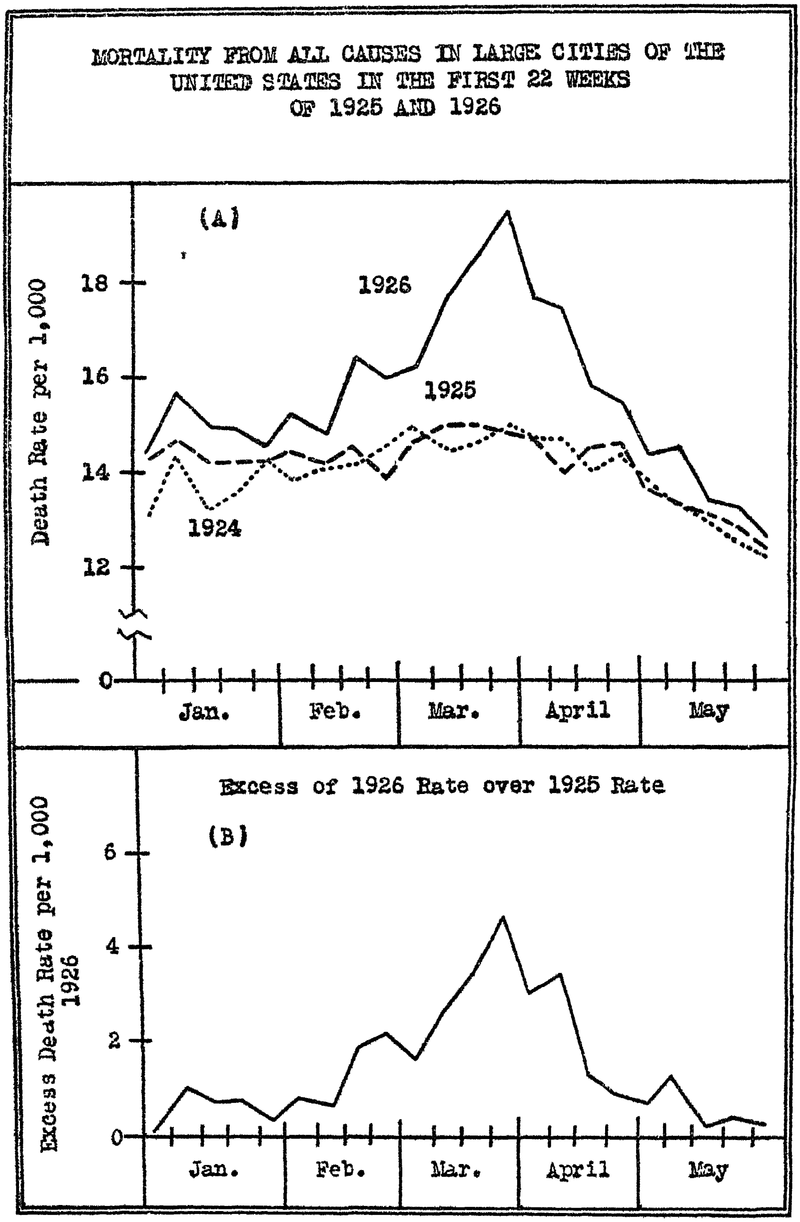

FIG 1

tion (Figure 1 (B)). The annual death rate in these cities rose to 19.4 per 1,000 in the week of March 21–27, which was 4.6 per 1,000, or 31 per cent higher than the rate for the corresponding week of

1925. Taking the period January 3 to April 30, 1926, and subtracting the deaths in the corresponding period of 1925, we obtain an excess of about 16,000 deaths in the 60-odd cities having a population of 100,000 or more and a gross population of about 30,000,000. Some of these deaths undoubtedly were due to the unusually high prevalence of measles, on the other hand, no allowance is made for any decrease in deaths from other causes or for deaths occurring after April 30 that are attributable to the epidemic. The excess death rate in these cities for the period in question was 0.53 per 1,000 and will probably add not less than that to the annual mortality rate which would have been expected for the year 1926 in this population. The mortality returns for towns and rural areas are not yet available, and it is unsafe to base an estimate of the increase in deaths for the entire country upon the experience of its larger cities, especially for an epidemic occurring in the spring

Some idea of how the 1926 epidemic fits into the picture of the "influenza waves" that have occurred since 1918–19 may be gained from the graph of weekly mortality from all causes in the same group of cities, as plotted in Figure 2 What may be termed a "normal seasonal" variation in the mortality rate has been eliminated roughly by a simple method [2] and the curve as plotted represents the remaining variations It is quite evident that there has been no marked upward or downward trend in the death rate during the seven years' period after the occurrence of certain deviations of a rather acute kind are taken into account. Certain variations of other types are indicated with which we are not concerned here. The maximal rates reached by the more acute deviations occurred in the weeks ending February 25, 1922, March 5, 1923, June 13, 1925, and March 27, 1926. The high mortality rate in June, 1925, undoubtedly was associated with the unusually sudden severe "heat wave" (2), the other four maximal rates were due in large measure to the increase in prevalence of respiratory diseases that commonly were diagnosed as "influenza," and were so recorded in reports of morbidity among various population groups for whom continuous records are available. In Figure 3 one record of this kind is shown graphically, which brings out the fact that in this particular group of persons in Boston, "influenza" or "grippe" was prevalent in the winter of 1924–25 The attacks were not reflected in the pneumonia rate, however. This occurrence was observed in other localities also, and no marked increase in mortality was evident.

Judging from the European records which are now available, the familiar pandemicity of influenza was a characteristic of the 1926

[2] The weekly death rates for annual periods beginning with July 1, 1921, 1924, and 1925, were used to determine roughly a seasonal variation in mortality not greatly affected by influenza or other acute outbreaks The weekly values in terms of mortality rate were read from a curve drawn by inspection, and the differences were plotted in the diagram reproduced in Figure 2

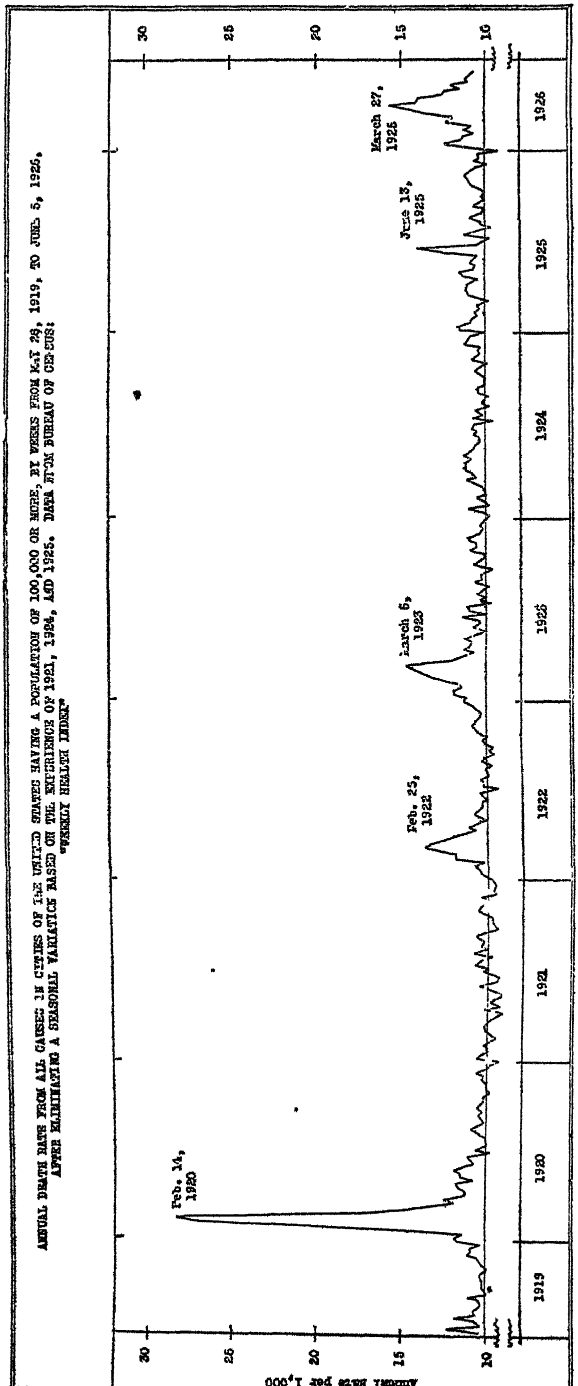
ANNUAL DEATH RATE FROM ALL CAUSES IN CITIES OF THE UNITED STATES HAVING A POPULATION OF 100,000 OR MORE, BY WEEKS FROM MAY 28, 1919, TO JUNE 5, 1926,
AFTER ELIMINATING A SEASONAL VARIATION BASED ON THE EXPERIENCE OF 1921, 1924, AND 1925. DATA FROM BUREAU OF CENSUS:
"WEEKLY HEALTH INDEX"
Annual Rate per 1,000
30
25
20
15
10
Feb. 14, 1920
Feb. 25, 1922
March 3, 1923
June 13, 1925
March 27, 1926
1919
1920
1921
1922
1923
1924
1925
1926

FIG 2

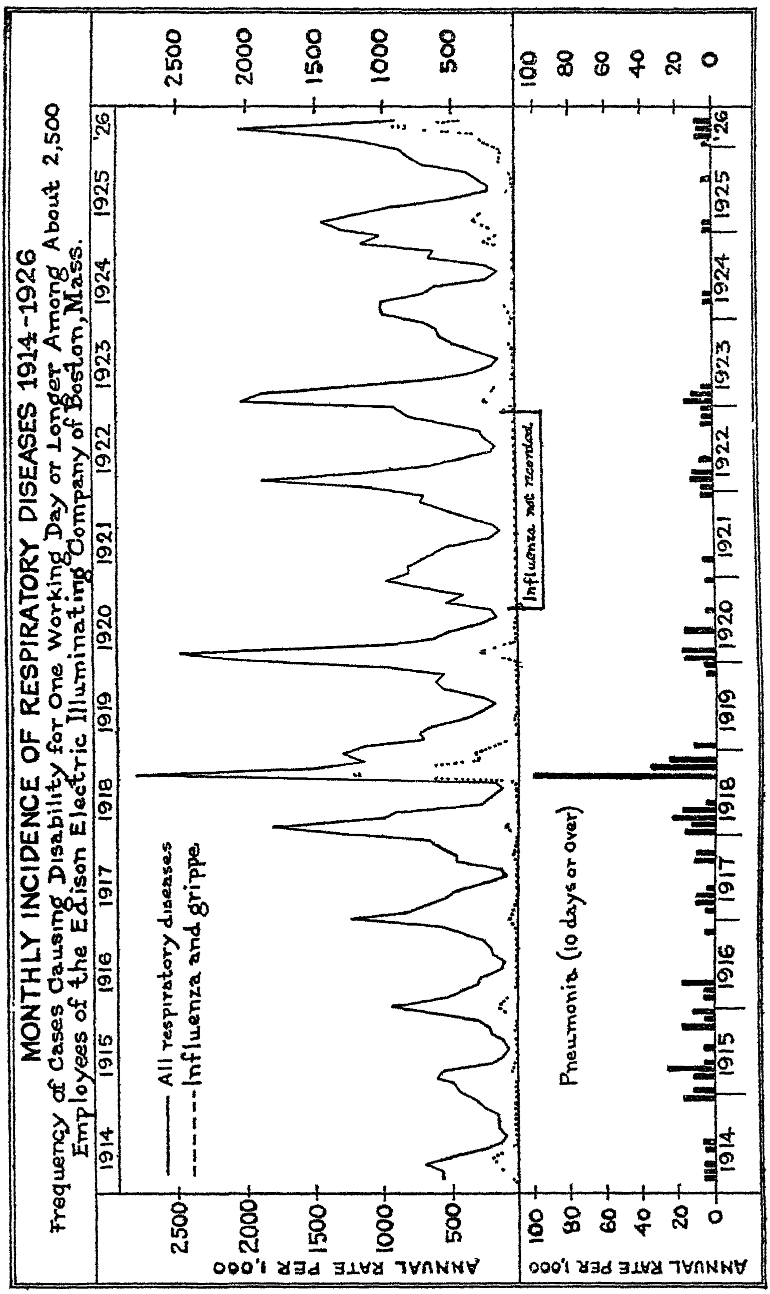
MONTHLY INCIDENCE OF RESPIRATORY DISEASES 1914-1926
Frequency of Cases Causing Disability for One Working Day or Longer Among About 2,500 Employees of the Edison Electric Illuminating Company of Boston, Mass.
1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 '26
All respiratory diseases
Influenza and grippe
Influenza not recorded
Pneumonia (10 days or over)
ANNUAL RATE PER 1,000
2500 2000 1500 1000 500
100 80 60 40 20 0

FIG 3

outbreak In the group of 105 Great Towns of England and Wales, a very marked increase in influenza mortality appeared in March, reaching its peak in the week ending April 17 The weekly records of cases of pneumonia in England and Wales show a synchronous rise and fall An epidemic condition, more or less severe, was manifested during February, March, and April in Glasgow, Paris, Amsterdam, Stockholm, the 46 German cities as a group, and Milan (3).

Although the severity of the 1926 outbreak, as measured by the mortality rate, was small in comparison with the severity of the 1918 epidemic, or compared with that of the 1920 epidemic, the three epidemics were similar in certain broad epidemiological respects, and markedly dissimilar in certain other respects. In Table 2, a comparison is made of the weekly excess mortality rates from influenza and pneumonia during the three epidemics in the large cities of the United States These rates have been plotted on a logarithmic ordinate scale in Figure 4, and the curves suggest: (1) A similarity from the point of view of duration, all of the waves having begun and ended within a period of three months, (2) a similarity in the time required for the epidemics to reach their maximal mortality rates, (3) a similarity in the *rate* at which mortality rose and fell, although it is suggested that the time required for the 1926 epidemic to spread and reach its crest was somewhat longer than that for the 1918 and 1920 epidemics. In other words, aside from some apparent differences which should not be considered until more complete records are available, these three outbreaks spread over the entire country in comparatively short periods of approximately the same length, and within that period they were generally similar with respect to their course from the point of view of time

TABLE 2 —*A comparison of the weekly excess mortality rate per 100,000 for influenza and pneumonia during the influenza epidemics of 1918, 1920, and 1926, in the large cities of the United States*

1918		1920		1926	
Week ended—	Excess [1]	Week ended—	Excess [1]	Week ended—	Excess [2]
				Feb 6	−2
Sept. 14	−6			Feb 13	8
Sept 21	76			Feb 20	73
Sept 28	326	Jan 17	−27	Feb 27	62
Oct 5	1,028	Jan 24	184	Mar 6	97
Oct 12	2,557	Jan 31	741	Mar. 13	149
Oct 19	4,592	Feb 7	1,241	Mar 20	200
Oct 26	4,695	Feb 14	1,319	Mar 27	241
Nov. 2	3,732	Feb 21	867	Apr 3	194
Nov 9	1,832	Feb 28	422	Apr 10	131
Nov. 16	989	Mar 6	185	Apr 17	84
Nov. 23	920	Mar 13	69	Apr 24	14
Nov 30	526	Mar 20	9	May 1	28
Dec. 7	617			May 8	29
Dec. 14	792				
Dec. 21	801				
Dec 28	629				

[1] Excess over corresponding week of median year of the period 1910-1916 in cities included in the Weekly Health Index of the Bureau of the Census Data from Public Health Reports, March 26, 1920 (35 748)

[2] Excess over corresponding week of 1925 in 95 cities included in the Public Health Reports of the Public Health Service.

The 1926 outbreak was similar to the epidemics of 1918 and 1920 in another respect, namely, that there was a fairly definite geographic direction in which the wave traveled and spread But here the spatial similarity ceases; in fact, each of these epidemic waves had its own particular direction. It will be recalled that in the autumn of 1918 the epidemic first manifested itself in New England

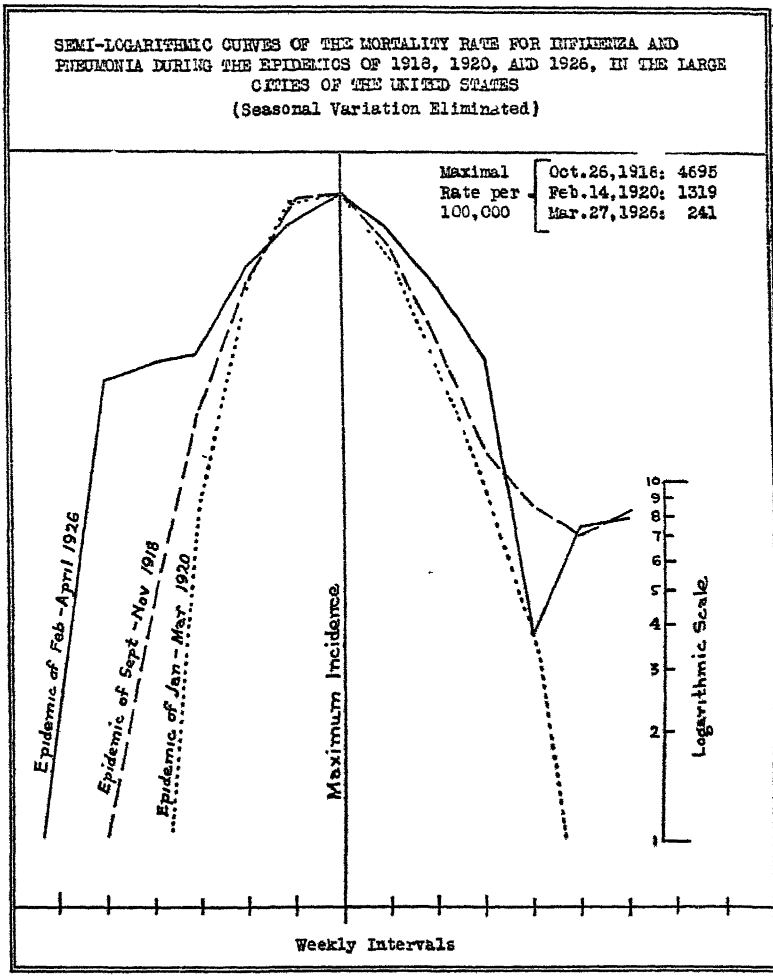

FIG. 4

and then spread south and west, first appearing in the larger cities in its course, and later radiating from these cities into the surrounding areas (4) The 1920 epidemic, on the other hand, appeared first in the North Central section and apparently spread to the East, South, and West, in somewhat the same manner as did its greater predecessor (5). Certain localities appeared as exceptions in either

epidemic, but the general directions were fairly clear. The 1926 epidemic, however, seems to have traveled in directions entirely different from those of either of the two preceding epidemics; apparently the main general direction was from the west and southwest to the southeast and then north, the New England section being the latest affected

The geographic course of the epidemic can be described more clearly by a graphic presentation of certain data now at hand In Figure 5 there are plotted the weekly number of cases reported by telegraph to the United States Public Health Service by the health departments of 16 States, selected for use here chiefly because of their geographic location and partly because of certain qualities of their reports[1] The States are arranged in the chronological order in which the peak in the cases reported occurred Thus, in California the influenza wave appeared earlier than in any other section represented The epidemic next appeared in the sections represented by Utah, by New Mexico, and by Oregon, omitting Maryland for the moment It apparently moved east, reaching the Southern States first, and the Northeastern States last. The geographic course of the outbreak is also indicated by the weekly reports to the Public Health Service from several hundred towns and cities. In 106 of these the influenza reports showed a fairly definite epidemic condition, namely, an increase and fall in the number of cases reported within a period of a few weeks The week in which the number of these cases reached its peak in each of these 106 larger towns and cities has been marked on the map which is reproduced in Figure 6 Unfortunately for our purpose, cities are relatively infrequent in the western section where the path of the epidemic would be especially interesting to follow But the broad directions seem to be fairly clear; again it is indicated that the earliest manifestations of the epidemic were on the middle Pacific coast, whence it spread southeast, and from the southern section north and east.

It is to be regarded as quite probable that, had we more definite information on many more localities, the picture might be quite different in its detail. In Figure 5 it was shown that the principal part of the epidemic in Maryland occurred in the latter part of January and the early part of February The same indication is given in Figure 6 In Baltimore the greatest excess (over 1925) in the mortality rate occurred in the week ending February 13, and an increased death rate had manifested itself two or three weeks before In Richmond, Va., this maximum occurred only two weeks later. In Savannah, Brunswick, and Atlanta, Ga., the reports suggested the occurrence of a rise in influenza cases at about the same time as in Balti-

[1] The number of cases reported can not, of course, be taken as an indication of the actual incidence, but the reports are satisfactory for showing roughly the chronological behavior of the disease and for comparing different areas or localities with respect to this point

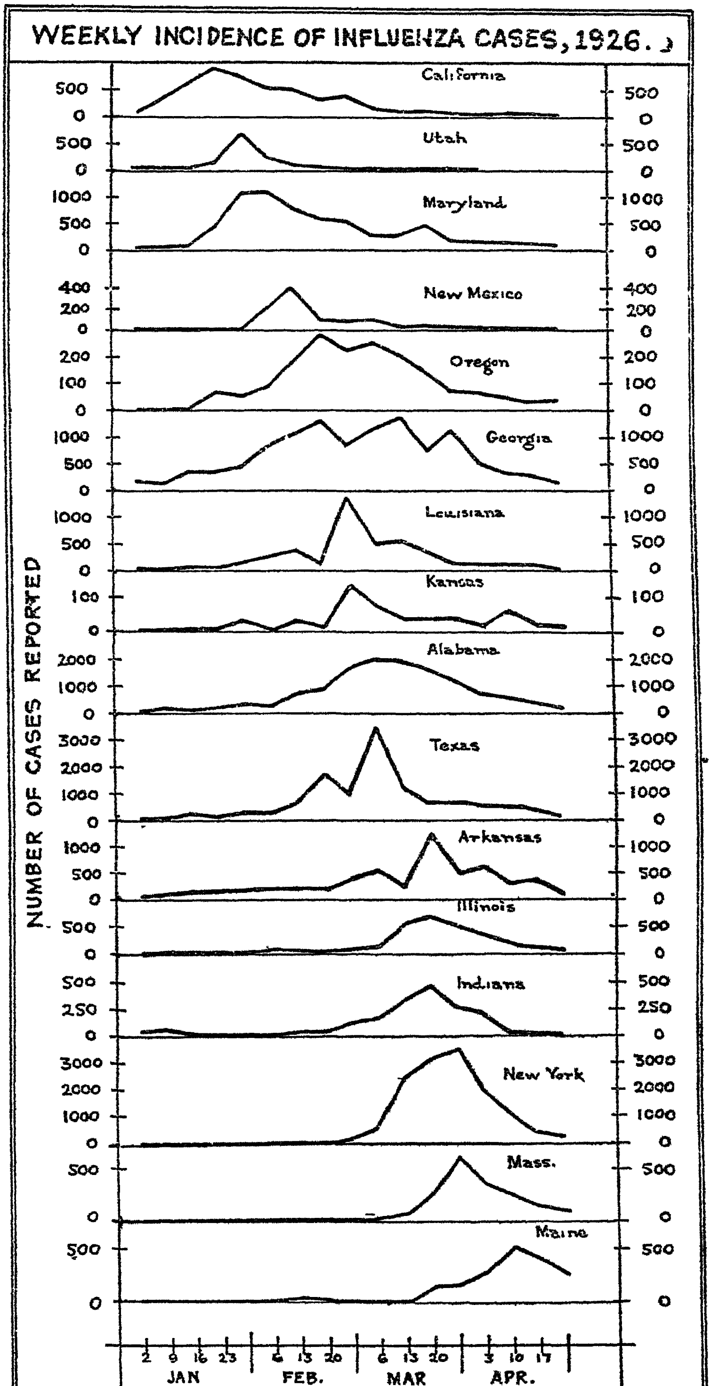
WEEKLY INCIDENCE OF INFLUENZA CASES, 1926.
NUMBER OF CASES REPORTED
California
Utah
Maryland
New Mexico
Oregon
Georgia
Louisiana
Kansas
Alabama
Texas
Arkansas
Illinois
Indiana
New York
Mass.
Maine
JAN
FEB.
MAR
APR.

FIG. 5

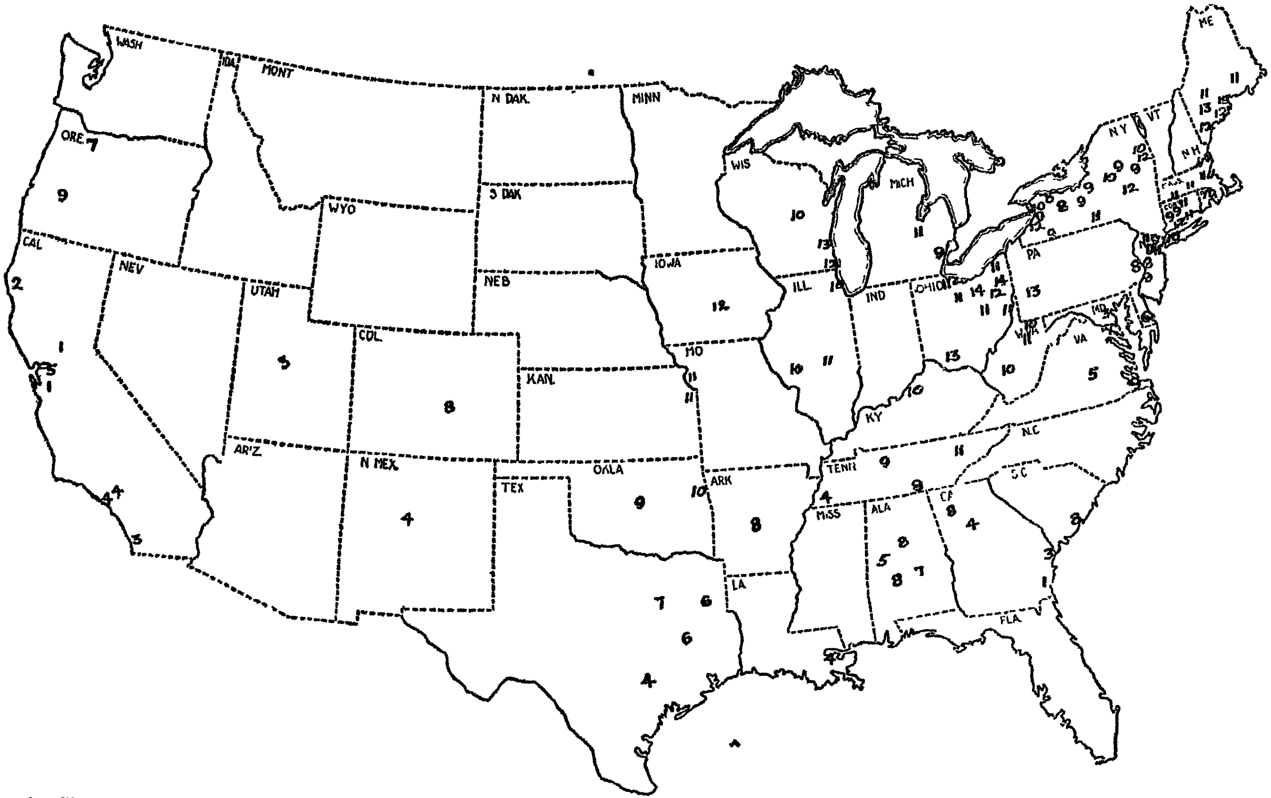

FIG. 6.—Chronological order, by weeks, of maximum incidence of cases of influenza reported in each of 106 cities in the United States, January 10–May 1, 1926. Week ended January 16=1, week ended January 13=2, week ended May 1=15

more. Thus, at certain points at least on or near the south Atlantic seaboard there were evidences of unusual influenza prevalence at about the same time or within two or three weeks of its appearance in the middle Pacific coast region

The weekly excess death rates from influenza and pneumonia in the 96 cities, as shown in Figure 7, give some idea of the relative severity of the epidemic in the principal cities in different sections of the United States, as well as of the direction of its spread It appears that in the West North Central section the usual seasonal mortality was hardly affected at all, and the epidemic did not manifest itself in a sharp or severe form. On the other hand, its effects were much more marked and severe in the other sections, particularly in the cities in the Middle Atlantic States A great variation in mortality from epidemic influenza, it will be recalled, was manifested among different cities in 1918–19 and 1920, a variation that Pearl (6) found to be correlated, so far as the 1918 pandemic was concerned, with the death rates from certain organic diseases in previous years The same sort of a variation undoubtedly appeared in 1926, whether or not it is associated with the mortality from other causes in nonepidemic periods or from influenza in prior epidemics can not be determined until the records are more complete. In fact, the studies conducted by the United States Public Health Service on morbidity from influenza in 1918 show quite definitely that the incidence rate for cases differed markedly in different localities and that there was an equally striking variation in case fatality (7), so that, lacking contrary evidence, we may assume that similar differences will account for the variations in the mortality rate in 1926. The mortality experience in European cities in 1926 is very much the same as that in American cities In Glasgow a rather severe epidemic occurred, whereas increased influenza mortality did not manifest itself at all in Dublin, and in Belfast a month or more later. In London, Paris, and several Italian cities, for example, quite definite indications are given by the current records of an increased mortality from influenza in the spring of 1926, whereas in Vienna, Prague, Budapest, and Swiss cities there is little or no evidence of such an increase (3).

The current disease reports issued by the Surgeon General's office, War Department (8), show quite definitely not only a rise in the incidence of influenza but also a concurrent increased incidence of secondary pneumonia among troops in the United States during the period January–May, 1926. This is not reflected to any considerable extent in the rates for "common respiratory" diseases or "primary pneumonia." The weekly rates on an annual basis are plotted as a series of graphs in Figure 8, with similar graphs for 1925 for comparison.

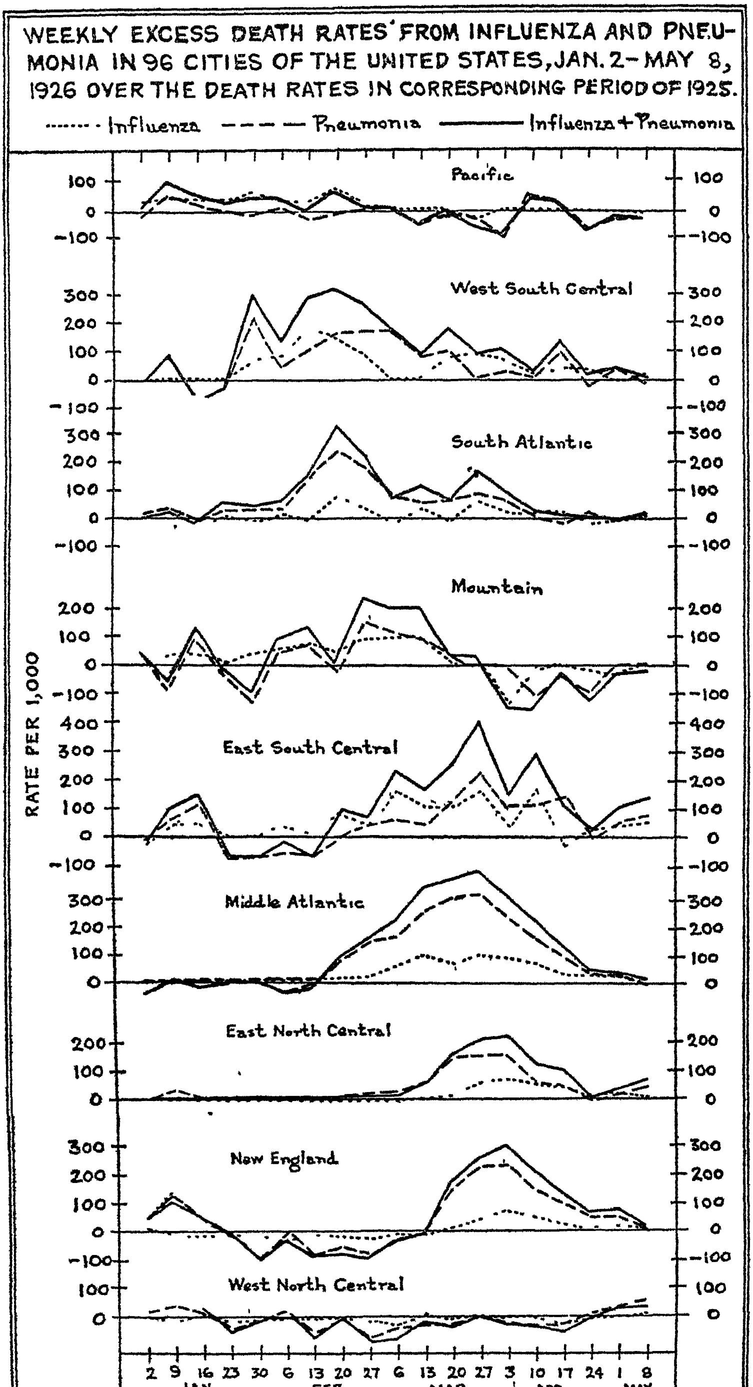
WEEKLY EXCESS DEATH RATES FROM INFLUENZA AND PNEUMONIA IN 96 CITIES OF THE UNITED STATES, JAN. 2 – MAY 8, 1926 OVER THE DEATH RATES IN CORRESPONDING PERIOD OF 1925.
Influenza
Pneumonia
Influenza + Pneumonia
Pacific
West South Central
South Atlantic
Mountain
East South Central
Middle Atlantic
East North Central
New England
West North Central
RATE PER 1,000
2 9 16 23 30 6 13 20 27 6 13 20 27 3 10 17 24 1 8
JAN FEB MAR APR MAY

FIG 7

We are accustomed to examine first such indications as are afforded by the records of mortality according to age, chiefly, perhaps, for the reason that the 1918 pandemic presented an age fatality curve that was in striking contrast to that shown by nearly every other important disease. Unfortunately we shall have to wait until the mortality statistics are tabulated in greater detail before any comprehensive analysis of the 1926 data can be made, but the records for all causes

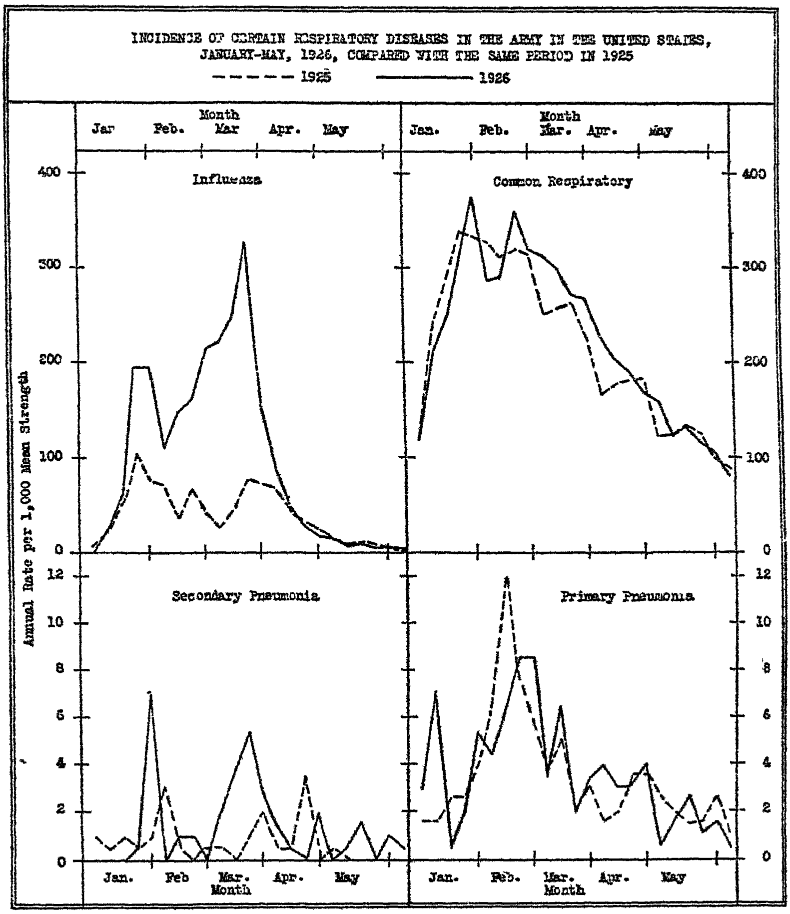

FIG. 8

now available in current reports for two large localities are not without interest. These are the widely separated cities of New York and New Orleans. Since it is important to eliminate as far as we can the deaths which ordinarily are expected to occur, we have simply subtracted the number of deaths reported for each age group in 1925 from those reported in 1926, only the epidemic period of 1926 and the corresponding calendar period of 1925 being considered.

TABLE 3.—*Increase in deaths at different ages in New York City during the period February 13–April 17, 1926, over the corresponding period in 1925*

Age (years)	Number of deaths		Per cent increase 1926 over 1925
	1925	Excess in 1926	
0–4	2,319	1,224	53
5–64	8,238	1,479	18
65	3,461	1,661	48

The result for New York City is given in Table 3 (9). The age grouping used by the New York City health department does not permit of much refinement, but the indication afforded seems to be clear enough so far as the data allow During the period February 13–April 17, 1926, when influenza mortality was abnormally high, there was an increase of about 50 per cent in deaths under 5 and over 64 years of age as against a very much smaller increase for the age 5–64. Somewhat more refined age groupings, as well as distinctions as to color and sex, are available for New Orleans (10). Here (Table 4) it is even more definitely shown that during the 1926 epidemic the increase in mortality was confined chiefly to the extremes of life—under 5 years, and 70 years and over—although some increase is evidenced in the age group 50–69 years The indication is shown for both whites and negroes.[4] Just how much of the increase in the death rate among young children was due to the widespread prevalence of measles can not be determined until further details are available with respect to cause of death at different ages, but it is probable that some of this increase may be accounted for in this way.

TABLE 4.—*Increase in deaths at different ages in New Orleans during January–February, 1926, over the corresponding period in 1925, by color*

Age (years)	Number of deaths				Per cent increase 1926 over 1925	
	1925		Excess in 1926			
	White	Colored	White	Colored	White	Colored
0–4	116	95	48	21	41	22
5–14	23	18	−3	3	−13	17
15–24	60	61	−25	−10	−42	−16
25–49	204	248	14	−6	7	2
50–69	281	131	80	55	28	42
70+	160	52	109	31	68	60

[4] The mortality by sex in New Orleans shows no difference in the excess for all causes, the increase over 1925 being 21 and 20 per cent for males and females, respectively The number of deaths from influenza among males in January–February, 1926, was 53, or 26 per cent higher than in 1925, whereas among females the number of influenza deaths was 57, or 96 per cent higher than in 1925 The numbers are too small, however, to afford any conclusive evidence.

If we consider the age curves for mortality from various respiratory diseases, the suggestion afforded by these fragmentary data on the age incidence of the increased mortality during the influenza epidemic is that the mortality was due, in greater degree than usual, to sequelae of broncho pneumonia. Tewksbury (11), commenting upon the Pennsylvania mortality reports for March, 1926, points out that "the 1918 and 1920 epidemics were chiefly influenzal in character, the influenza-pneumonia ratio being 2 0 and 1 3 to 1, respectively," but that "the 1923 and 1926 epidemics were. on the other hand, chiefly pneumonic in character. the influenza-pneumonia

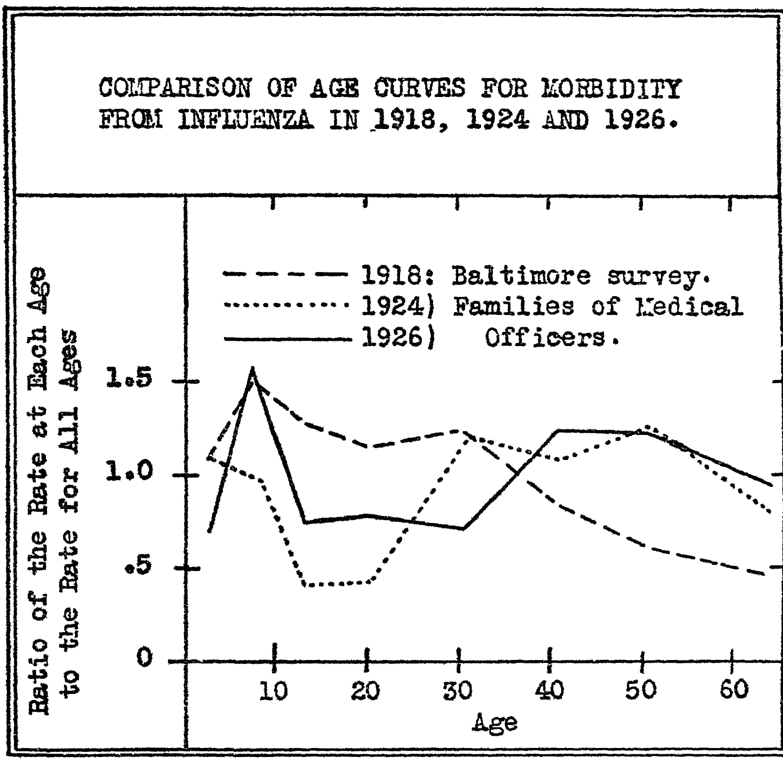

FIG. 9

ratio being 0.4 to 1 and 0 5 to 1, respectively" This observation is not a general one, however The Wisconsin health department comments to the effect that while the chief increase in the number of deaths from communicable diseases in the first quarter of 1926 was due to influenza, there was in the same period a decrease in the mortality from pneumonia, and draws the conclusion that "influenza deaths during the past three months were not complicated with pneumonia to the same extent as in some of the former epidemics" (12). It is regarded as quite probable that the severity of cases in this epidemic, as in former epidemics, varied geographically.

The influenza cases in families of medical officers of the Army, Navy, and Public Health Service, who are collaborating with the Office of Influenza Investigations of the Public Health Service, may also be used to indicate age incidence Expressing the incidence at different ages in a form of *relative* variation (i e, the ratio of the rate for each age to the rate for all ages) we have in Figure 9 compared the variations according to age of the 1926 influenza cases in the medical officers' families with those of influenza cases in 1918 recorded in Baltimore (13) in a large population group and with those occurring in 1924 in the same medical officers' families The 1918 cases were, of course, pandemic in character The 1924 cases did not occur during an epidemic and followed the usual seasonal course of common respiratory diseases It will be noted, with respect to the age curve for 1926, that a relatively high incidence is shown in the ages 5–9 and 35–54 The comparison between the curves for the three years suggests that the interepidemic (1924) influenza affected persons of the ages 10–24 far less (relatively) than the pandemic (1918) influenza, but also less than the kind of influenza we had in 1926 On the other hand, relatively speaking, the incidence of 1926 influenza cases was similar to that of 1918 in the age period 5–9, but was higher in the ages 35 years and over.

REFERENCES

(1) Weekly Health Index, Bureau of the Census, United States Department of Commerce
(2) Weekly Bulletin of the New York City Health Department, June 26, 1926 (xv:103).
(3) Monthly Epidemiological Reports, Health Section, League of Nations' Secretariat
(4) Sydenstricker, Edgar: Preliminary Statistics of the Influenza Epidemic Public Health Reports, Dec 27, 1918
(5) Epidemic Influenza—Prevalence in the United States Public Health Reports, Jan 30–Apr. 2, 1920
(6) Pearl, Raymond: Influenza Studies: I On Certain Statistical Aspects of the 1918 Epidemic in American Cities Public Health Reports, Aug. 8, 1919 (34.1743). II Further Data on the Correlation of Explosiveness of the Outbreak of the 1918 Epidemic III On the Correlation of Destructiveness of the 1918 Epidemic Public Health Reports, Feb 18, 1921 (36.273 and 289)
(7) Frost, W. H: Statistics of Influenza Morbidity. Public Health Reports, Mar 20, 1920
(8) Data from Office of the Surgeon General, War Department, Washington.
(9) Weekly Bulletins of the New York City Health Department, February–April, 1926.
(10) Monthly Bulletins of the Board of Health for the Parish of Orleans and the City of New Orleans, January and February, 1926.
(11) Vital Statistics Bulletin, Pennsylvania Department of Health, June, 1926.
(12) Wisconsin Board of Health Health Bulletin, January–March, 1926 (4:24).
(13) Frost, W H, and Sydenstricker, Edgar. Influenza in Maryland. Public Health Reports, Mar 14, 1919 (34:491–504).

CURRENT WORLD PREVALENCE OF DISEASE

REVIEW OF THE MONTHLY EPIDEMIOLOGICAL REPORT ISSUED JUNE 15, 1926, BY THE HEALTH SECTION OF THE LEAGUE OF NATIONS' SECRETARIAT[1]

An influenza outbreak occurred in Northern Ireland during the latter part of April and reached its peak about the middle of May, according to information in the Epidemiological Report published June 15 by the health section of the League of Nations' secretariat. This was approximately one month later than the spring influenza outbreaks which occurred in Scotland and England. Reports from the Irish Free State did not indicate any coincident increase in influenza in that part of Ireland. The mortality from all causes and deaths from influenza in towns in Ireland, in Scotland, and in England and Wales during recent weeks are given in the accompanying table

TABLE 1.—*General mortality and deaths from influenza in British towns from March to May, 1926*

Two weeks ended—	105 English and Welsh towns		16 Scottish towns		7 towns in Northern Ireland	
	Mortality per 1,000 (all causes)	Number of deaths from influenza	Mortality per 1,000 (all causes)	Number of deaths from influenza	Mortality per 1,000 (all causes)	Number of deaths from influenza
Mar 13	12.7	185	15.0	27	14.5	0
Mar 27	13.4	272	17.2	43	16.3	2
Apr 10	15.1	517	21.7	196	15.9	3
Apr 24	13.7	511	19.0	138	19.8	6
May 8	12.1	315	15.5	52	19.6	22
May 22	11.7	229	14.1	32	21.1	50
June 5	10.9	158	13.4	12	18.5	32

In Denmark, 12,760 influenza cases were reported during May, as against 10,539 during April In 1925, April was the month of maximum prevalence of influenza in Denmark, while the maximum occurred in March in 1924 and 1923, and in January in 1922 In Sweden the number of influenza cases has declined since February. In the Netherlands a considerable increase in the number of deaths from influenza was reported for April as compared with March.

Plague.—The plague situation in the Mediterranean ports continued favorable during May There were two cases reported at Constantinople, two in Greece—one case at Zante and one at Patras—and eight cases reported at Suez in the six weeks ended June 12. A few cases were reported also from the inland Provinces of Egypt, mostly from Beni-Suef.

[1] From the Office of Statistical Investigations, U. S. Public Health Service

An outbreak of plague occurred in Tunisia at Kairwan, an inland district, and 122 cases were reported between May 11 and June 10. One case each was reported at Sfax, at Susa, and at Tangier.

"Plague was about twice as prevalent in India during April as during the corresponding month of the preceding year," states the Report. "This is entirely due to the high prevalence in the United Provinces and especially in the Punjab, where the curve of prevalence was intermediate between that of the relatively severe epidemic of 1924 and the low incidence of 1925 The Punjab epidemic appears to have reached its maximum during the week ended April 24, which is about the normal period for the plague maximum in this Province. More plague cases were reported in the United Provinces during April than during March—an event which has happened only once before, in the exceptionally severe outbreak of 1907. There were 9,103 deaths from plague in the United Provinces during the four weeks ended May 1, as against 6,949 during the preceding four weeks "

An outbreak of plague at Amoy began the first week in May, and in six weeks 49 cases were reported.

The number of plague cases in Iraq had increased up to the middle of May. At Baghdad 83 cases were reported in the two weeks ended May 22, as against 39 cases during the preceding two weeks. Cases also occurred in the neighboring districts, but Basra was still free from infection.

In Madagascar the number of cases of plague declined from 101 during April to 25 in May. In Kenya the number of cases dropped from 81 in March to 37 in April.

Cholera.—"The greater part of the Indo-Chinese Peninsula has become infected" says the Report, "the disease (cholera) having spread slowly from river to river and from port to port " In Siam, excluding Bangkok, 6,429 cases had been reported from the beginning of the outbreak last October up to May 8. During April the weekly number of cases was increasing, and 487 cases were reported in the last week in April, as against 339 in the preceding week. Up to June 12, 3,018 cases of cholera had been reported at Bangkok since last October; but the peak of the epidemic there seems to have been reached in the week ended May 22, when 362 cases were reported. In the succeeding three weeks, 219, 146, and 116 cases were reported, respectively.

In French Indo-China, 6,310 cases of cholera had been reported up to the end of May. The infection had spread to Haiphong, in Tonkin, at the end of May, and 103 cases were reported in the week ended June 12, the fourth week of the outbreak

The incidence of cholera in India increased rapidly from the middle of March to the middle of April, and then began to diminish somewhat. The cholera incidence has been particularly heavy in Bengal, where nearly one-half the total deaths from the disease occurred. Bihar also has been severely affected Deaths in the various Provinces are shown in Table 2.

TABLE 2 —*Cholera deaths reported in the Provinces of India*

Province	1926		1925	Province	1926		1925
	Mar 7–Apr 3	Apr 4–May 1	Apr 5–May 2		Mar 7–Apr 3	Apr 4–May 1	Apr 5–May 2
North-west Frontier	0	0	0	Central Provinces	158	147	27
Kashmir	0	0	2,762	Madras Presidency	1,196	588	2,764
Punjab	0	2	425	Hyderabad State	0	0	2
Delhi	0	0	0	Bombay Presidency	4	1	4
United Provinces	200	307	49	Burma	384	662	155
Bihar and Orissa	1,329	2,987	2,901	Other Indian States	1	35	21
Bengal	3,549	4,638	1,977				
Assam	[1] 26	[1] 251	[1] 53		6,847	9,618	11,140

[1] Two weeks only.

Smallpox.—No change in the prevalence of smallpox on the European Continent during April or May was noted, the disease being rare or absent in most of the countries according to reports received. In England, the incidence increased somewhat during the second half of May, especially in the county of Durham. Cases reported during the four weeks ended June 12 numbered 776, compared with 630 in the preceding four weeks.

Smallpox continued prevalent in Algeria, where there were 183 cases during May, and 181 during April. In Egypt, 261 deaths from smallpox occurred in the first 15 weeks of 1926, as against 23 during the corresponding period of the preceding year.

Smallpox cases increased in Japan during the spring, and 785 cases were reported from January 1 to May 15, of which 516 were in the island of Kiushiu. There has been an increase also in Korea and in Kwangtung.

Cerebrospinal meningitis.—"The incidence of cerebrospinal meningitis in Europe has been much the same during the past winter and spring as during the corresponding period of the previous two years," states the Report. "One thousand six hundred and eighty-six cases were reported in 17 European countries during the first four or five months of 1926, as against 1,672 and 1,568 cases, respectively, during the corresponding periods of 1925 and 1924 in the same countries."

TABLE 3.—*Cerebrospinal meningitis cases reported in various countries during the first four or five months of 1924, 1925, and 1926*

Country	Period	1924	1925	1926
Scotland (towns)	20 weeks	80	60	80
England and Wales	do	186	197	177
Sweden	4 months	44	43	64
Denmark	do	52	44	47
Germany	18 weeks	314	303	308
Netherlands	20 weeks	48	53	48
Belgium	5 months	17	34	32
France	4 months	262	298	174
Switzerland	20 weeks	15	11	15
Italy	16 weeks	175	140	193
Austria	20 weeks	18	16	20
Czechoslovakia	4 months	45	78	101
Poland	18 weeks	166	172	186
Hungary	4 months	6	18	20
Kingdom of the Serbs, Croats, and Slovenes	5 months		76	68
Bulgaria	4 months	2	9	4
Greece	do	53	53	55
Ukraine	2 months	85	143	162
Siam	12 weeks	5	15	9
Japan	4 months	193	258	116
Hongkong	20 weeks	45	52	10
Algeria	5 months	22	29	21
Egypt	15 weeks	8	15	10
Kenya	4 months	19	7	13
Uganda	12 weeks	11	112	21
Nigeria	3 months	486	1,185	849
United States	4 months	614	619	735
Hawaii	3 months	39	9	12
Australia	12 weeks	8	22	13
New Zealand	16 weeks	11	11	11

Measles.—The incidence of measles was higher during the first four or five months of 1926 than during the corresponding period of 1925 in Scotland, Northern Ireland, the Netherlands, Denmark, Poland, and Switzerland, but lower in France, Italy, and the Balkans. The disease was three or four times as prevalent in the United States during the past spring as in 1925.

Malaria.—Malaria was somewhat less prevalent in Russia in 1925 than in either of the preceding two years The greatest continuous decline during these three years was in the northeastern area, the central industrial area, and the Middle Volga area. In the Ural district the disease was epidemic in 1924, but declined markedly in 1925, as was also the case in the Ukraine. On the other hand, more cases were reported in 1925 than in the previous two years in Turkestan, Kirghiz, the Caucasus, the Crimea, and in White Russia. The number of cases in each geographical area in each of the three years is given in Table 4.

TABLE 4.—*Malaria cases reported in the U. S. S. R. by geographical divisions, 1923–1925*

Geographical area	1923	1924	1925
North-Eastern	38,932	11,468	6,535
North-Western	4,501	5,725	4,691
Western	21,381	18,787	20,654
White Russia	2,833	8,218	14,607
Central Industrial	334,815	195,710	123,277
Central Black Soil	273,680	349,905	321,189
Ukraine	459,842	912,803	675,889
Crimea	6,295	13,575	17,139
Middle Volga	1,183,871	851,516	701,565
Lower Volga	754,025	660,571	684,570
Viatka-Vietluga	66,292	57,508	27,014
Ural	375,854	714,232	348,203
North Caucasus	782,216	814,330	869,991
Trans-Caucasus	173,281	358,996	391,119
Kirghiz	171,032	202,167	224,008
Turkestan	80,563	68,744	133,727
Siberia and Far East	218,120	425,693	350,262
Railways and waterways	609,323	313,529	210,279
	5,556,856	5,983,477	5,124,719

The following comment on the seasonal distribution of malaria in these three years is taken from the Epidemiological Report:

The seasonal curve of malaria incidence showed during 1925 two distinct maxima, one in June and the other in August, while during the two preceding years the curve for the whole Union of Socialist Soviet Republics had only one maximum, which occurred at the end of May. In order to understand this change it must be recalled that the maximum of the benign tertian malaria usually occurs in May and of the malignant tropical forms in the autumn. The latter have been most prevalent in central Asia, the Caucasus, and the Volga area, while the former prevails in central-western and northern Russian and in the Ukraine. The decline of the malaria incidence in this part of the country and its increase in the southeastern area of the Union have brought the autumnal type more in evidence. The maximum incidence in the Ukraine occurred in May, 1925, as was the case in 1924.

TABLE 5.—*Percentage distribution, by months, of malaria cases reported in the U. S. S. R. during 1923 to 1925*

Month	1923	1924	1925	Month	1923	1924	1925
January	2.5	2.6	3.6	August	13.8	9.8	12.1
February	2.8	3.3	4.4	September	9.8	8.0	11.7
March	5.4	5.7	7.1	October	6.5	4.4	7.9
April	9.4	13.4	10.2	November	3.4	2.2	5.6
May	15.3	20.4	12.6	December	1.9	2.1	3.9
June	15.7	15.6	11.4				
July	13.5	12.5	9.5		100	100	100

The number of malaria cases has shown a steady decline in Poland during the past four years as follows: In 1921, 52,965 cases; in 1922, 17,611; in 1923, 4,770; in 1924, 1,881; and in 1925, 1,775 cases.

Trachoma.—Statistics on trachoma are reported regularly by only a few countries, and are rarely complete. Sudden increases in the diseases may signify only increased efforts in the campaign against it. Data from those countries reporting the disease currently are given in Table 6.

TABLE 6.—*Trachoma cases reported in various countries, 1924–1926*

Country	Total, 1924	1925				1926, first quarter
		First quarter	Second quarter	Third quarter	Fourth quarter	
Germany	1,784	487	757	619	914	575
Austria	341	175	255	104	293	414
Danzig	54	9	11	17	12	11
Esthonia	528	168	142	76	85	91
France	[1] 73	8	29	11	6	12
Lithuania	2,375	571	531	372	644	----------
Malta	----------	89	71	123	259	107
Poland	2,954	1,012	1,057	962	1,720	1,400
Switzerland	13	2	12	1	1	5
Czechoslovakia	2,782	651	1,001	760	823	810
Saar Territory	3	4	0	1	10	4
Union of Socialist Soviet Republics						
Governments and Territories in Europe	362,890	139,401	166,602	149,045	105,057	[2] 46,185
Ukraine	49,592	18,022	17,160	15,874	19,160	[2] 14,325
Transcaucasia	45,982	4,474	11,326	15,603	14,579	[2] 190
Siberia	48,158	10,627	10,486	12,216	----------	----------
Kirghiz Republic [3]	12,045	----------	----------	----------	----------	----------
Turkestan [4]	6,648	----------	----------	----------	----------	----------
Waterways, railways	648	986	994	614	842	[2] 979
Tunisia	102	24	1	0	0	1
United States	3,260	392	487	444	628	316
New Zealand	20	10	5	4	10	3

[1] Compulsorily notifiable since Apr. 1, 1924.
[2] Incomplete data for January and February only.
[3] Total for 1925, 21,143 cases.
[4] Total for 1925, 23,181 cases.

THE RECENT TREND OF PUERPERAL MORTALITY [1]

During the past decade there has occurred a wide extension of nursing and of other measures directed toward the prevention of the serious and often fatal complications of the puerperal state. Public and private agencies have endeavored to provide instruction and supervision for pregnant women, increasingly stringent regulations of midwifery have been instituted, hospital service in confinement has been much improved and made widely available, and post-natal care has been provided through public health nursing agencies working in the home. It is of interest, therefore, to examine the Census Bureau's records of the mortality from abnormalities associated with childbearing for an area of the United States [2] where

[1] From the Statistical Bulletin, Metropolitan Life Insurance Co., July, 1926.
[2] Connecticut, District of Columbia, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New York, Pennsylvania, and Vermont.

much of the admitted improvement in maternity service has taken place during the past 10 years

There seems to have been a slight increase in the death rate for puerperal conditions reckoned against births in a constant area This is clear from a comparison of the rates for the two periods 1915–1917 and 1921–1923. The death rates for puerperal sepsis and puerperal eclampsia have remained unchanged These two conditions account for more than one-half of the mortality connected with childbearing. Most of the preventive effort of agencies for maternal care has been directed at these two conditions.

Some improvement in the mortality figures has been observed in rural districts of these nine States But here we have to consider the effect of improvement in birth registration An increase in the proportion of births registered would tend to decrease puerperal mortality rates based upon births

The fact that there has been no significant improvement in maternal mortality rates during the period under review should provoke inquiry What could have been expected of the maternity work which was instituted with such fervor and zeal ten years ago? Was it founded upon sound principles, were its aims realizable, and was there a program sufficiently comprehensive to affect the vast number of maternity cases which occur annually in the area under survey? Or, have new factors intervened to offset the work of boards of health and of private agencies? Has the increased proportion of hospitalized cases been accompanied by more septic complications? Whatever be the answers to these and other questions which arise, it is clear that over the past decade little if any impression seems to have been made upon the risk of death in childbearing.

INFANT MORTALITY IN LARGE CITIES OF THE BIRTH REGISTRATION AREA, 1926

The Department of Commerce has issued the following statement showing the number of deaths of infants under 1 year of age per 1,000 births for the white and colored populations in selected cities of the birth registration area for 1926:

Number of deaths (exclusive of stillbirths) of infants under 1 year of age per 1,000 births, by color, for selected cities,[1] 1924, arranged by decreasing ratios for the colored

City	Deaths of infants per 1,000 births		City	Deaths of infants per 1,000 births	
	Colored	White		Colored	White
Leavenworth, Kans	571.4	77.4	Norfolk, Va	140.6	46.3
Jeffersonville, Ind	409.1	74.1	Wilson, N C	137.0	68.4
Cairo, Ill	328.4	76.9	Roanoke, Va	135.6	75.1
Paducah, Ky	327.9	88.0	Gastonia, N C	131.0	44.9
Staunton, Va	260.9	107.8	Philadelphia, Pa	130.7	67.7
Wilmington, Del	247.7	74.4	Newport News, Va	129.9	54.9
East St Louis, Ill	228.7	83.5	Jacksonville, Fla	129.9	68.9
Winston-Salem, N C	222.7	85.4	Columbia, S C	129.1	91.2
Meridian, Miss	221.0	41.6	Chicago, Ill	126.2	73.0
Charleston, S. C	218.2	89.1	Richmond, Va	124.5	69.1
Atchison, Kans	214.3	51.3	Cincinnati, Ohio	124.3	72.5
High Point, N C	213.6	75.0	Newark, N J	124.1	59.9
Petersburg, Va	211.9	84.2	Florence, S. C	124.0	130.1
Durham, N. C	211.8	49.6	Baltimore, Md	124.0	75.9
St Petersburg, Fla	201.8	56.1	Greensboro, N. C	123.8	52.0
Danville, Va	201.5	77.4	Indianapolis, Ind	123.0	70.2
Raleigh, N C	195.5	67.1	Rocky Mount, N C	121.4	78.1
Jackson, Miss	195.7	88.9	Anderson, S C	120.4	81.5
Wilmington, N C	193.4	84.5	Detroit, Mich	117.9	76.2
Goldsboro, N C	189.9	66.0	Greenville, Miss	114.5	76.9
Spartansburg, S. C	189.7	101.8	Vicksburg, Miss	113.2	44.6
Montclair, N J	187.5	72.8	Washington, D C	108.5	61.6
Coffeyville, Kans	183.7	38.6	Steelton, Pa	107.1	105.0
Greenville, S C	181.8	44.2	Cleveland, Ohio	106.7	62.8
New Bern, N C	181.3	62.0	New York, N Y	105.7	65.9
Lexington, Ky	178.9	78.9	Lynchburg, Va	102.8	66.7
Alexandria, Va	178.6	71.6	Columbus, Ohio	100.5	61.1
Frederick, Md	173.9	87.2	Omaha, Nebr	100.0	65.7
Portsmouth, Va	173.4	74.1	Atlantic City, N J	99.6	70.7
Kansas City, Kans	169.6	84.9	Louisville, Ky	99.3	67.1
Charlotte, N C	163.5	51.2	Hattiesburg, Miss	98.8	59.3
Key West, Fla	162.2	71.7	Boston, Mass	96.9	73.7
Chester, Pa	161.0	74.1	Tampa, Fla	92.7	54.6
Asheville, N. C	160.2	88.7	Orange, N J	92.1	40.5
Pittsburgh, Pa	151.4	86.0	Salisbury, N C	90.9	50.8
Asbury Park, N J	150.0	37.3	Charlottesville, Va	88.6	89.8
Columbus, Miss	147.8	30.0	Oakland, Calif	83.6	64.3
Pensacola, Fla	146.7	82.9	Biloxi, Miss	80.0	117.5
West Chester, Pa	146.1	109.0	San Francisco, Calif	76.1	53.9
Miami, Fla	144.2	66.3	Laurel, Miss	65.2	42.6
Henderson, Ky	142.9	81.1	Los Angeles, Calif	54.4	66.6
Owensboro, Ky	142.9	90.6	Murphysboro, Ill	47.6	68.6
Annapolis, Md	142.9	50.3	Lawrence, Kans	47.6	80.6
Natchez, Miss	142.9	70.9	Coatesville, Pa	40.0	78.4
Springfield, Ohio	141.8	49.2	Seattle, Wash	33.7	47.6

[1] Includes all cities in the birth registration area of more than 10,000 population having either not less than 10 per cent or 10,000 colored population

DEATH RATES IN A GROUP OF INSURED PERSONS

RATES FOR PRINCIPAL CAUSES FOR JUNE, 1926—COMPARISON BY WHITE AND COLORED FOR FIRST SIX MONTHS OF 1924, 1925, AND 1926

The accompanying tables are taken from the Statistical Bulletin for July, 1926, published by the Metropolitan Life Insurance Co. They present the mortality experience of the industrial insurance department of the company for June, 1926, as compared with May, 1926, and with June and the year 1925, and compare the rates for white and colored policyholders for the first six months of the years 1924, 1925, and 1926. The rates for 1925 and 1926 are based on a strength of approximately 17,000,000 insured persons in the industrial populations of the United States and Canada.

The death rate for June in this group of persons, 9 5 per 1,000, while higher than the rate for May, was lower than the rate for June a year ago This rate is stated to be about the average for June among these populations for the last five or six years.

Increased mortality rates over those for May were recorded for tuberculosis, cancer, cerebral hemorrhage, organic heart disease, Bright's disease, diarrheal diseases, accidents, and automobile fatalities Four of these causes—tuberculosis, cancer, cerebral hemorrhage, and automobile accidents—also registered higher death rates than in June, 1925.

The June death rate for influenza and pneumonia is stated to be considerably above the average for that month, and, in spite of the seasonal decline, the 1926 influenza outbreak was still showing its effect on the general mortality rate.

A high mortality from measles continued, the rate for June, 15 per 100,000, being next to the highest rate on the records of the company for that month.

Death rates (annual basis) for principal causes per 100,000 lives exposed, May and June, 1926, and June and year, 1925

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death	Rate per 100,000 lives exposed [1]			
	June, 1926	May, 1926	June, 1925	Year, 1925 [2]
Total, all causes	950.5	913.8	959.0	906.9
Typhoid fever	3.0	1.8	3.1	4.6
Measles	15.0	16.6	7.2	3.3
Scarlet fever	4.8	3.4	3.4	3.5
Whooping cough	10.3	11.0	9.1	7.7
Diphtheria	8.9	8.6	8.4	10.6
Influenza	21.1	38.5	13.1	21.9
Tuberculosis (all forms)	110.4	98.8	108.8	98.0
Tuberculosis of respiratory system	97.7	86.4	93.6	85.8
Cancer	74.1	65.5	70.2	70.5
Diabetes mellitus	15.5	14.0	15.3	15.2
Cerebral hemorrhage	54.1	50.2	52.4	53.5
Organic diseases of heart	135.8	126.6	137.3	126.6
Pneumonia (all forms)	83.5	108.4	75.8	86.5
Other respiratory diseases	13.1	12.5	12.3	13.3
Diarrhea and enteritis	23.6	15.4	31.6	36.6
Bright's disease (chronic nephritis)	73.9	69.6	74.5	69.8
Puerperal state	16.3	15.2	17.6	16.5
Suicides	7.8	7.8	6.6	6.9
Homicides	7.6	5.9	7.3	7.2
Other external causes (excluding suicides and homicides)	65.7	53.6	90.3	64.2
Traumatism by automobiles	18.8	14.9	16.2	16.5
All other causes	205.8	190.6	214.0	190.5

[1] All figures include infants insured under one year of age
[2] Based on provisional estimate of lives exposed to risk in 1925

FIRST SIX MONTHS OF 1924, 1925, AND 1926

The Bulletin states:

Health conditions among the wage-earning populations of the United States and Canada during the first half of 1926 were not only less favorable than for the same period of last year but of any year since 1920. The increased mortality in the first six months of 1926 was due, for the most part, to above-average prevalence of influenza and pneumonia. It will be recalled that in 1920 the country experienced a very severe recrudescence of the 1918 influenza pandemic, resulting in a very unfavorable death rate during the early part of that year. But in the latter half of 1920 the health situation took a surprising turn for the better; and, when the year had run its course, it was found that the mortality of the industrial population had actually registered the minimum rate, up to that time. General population mortality statistics likewise showed that, with a single exception, 1920 had registered a lower death rate than any previous year. What occurred in the second half of 1920 suggests strongly that the 1926 influenza flurry constitutes, in itself, no real ground for pessimism as to the final health record for this year. It is still entirely possible that sufficient improvement will develop in the latter half of 1926 to counterbalance the high rate of the first half of the year. Up to July 10, the cumulative death rate of 1926 was only 4 per cent above that for the corresponding period of 1925.

Higher death rates for the first half of 1926 were also recorded for measles, whooping cough, organic heart disease, chronic nephritis, and cerebral hemorrhage, which more than counterbalanced the improvement shown for diphtheria, tuberculosis, diarrheal diseases, puerperal conditions, and accidents

It is predicted that the death rate for measles for the year 1926 will be the highest ever recorded for this group of persons since 1911, when mortality records were first kept by the company for individual diseases. The rate for the first half of this year, 17.6 per 100,000 white persons, was exactly four times as high as the rate for the corresponding period of last year

The increased mortality from the "degenerative diseases" is stated to be due in part to the influenza outbreak, which hastened the death of many persons suffering from these chronic conditions.

The death rate for tuberculosis among the white policyholders continued to decline The rate for the colored, on the other hand, showed an increase over both 1924 and 1925.

The rate for diarrheal diseases showed a decline among both white and colored persons. Marked improvement among the whites and a slightly better record for the colored were shown for diseases incidental to pregnancy and childbirth, although improvement in the principal item in this group of causes, puerperal septicemia, was confined to the white persons.

The number of deaths from alcoholism and from cirrhosis of the liver registered an increase over both 1924 and 1925. It is stated that a check of the company's mortality records, by quarters, over a long series of years reveals a seasonal incidence in mortality from alcoholism, more deaths, on the average, occurring during the first quarter of the year than in any of the other three-month periods.

An increase was again recorded for automobile fatalities among both white and colored persons.

Death rates (annual basis) for principal causes per 100,000 persons exposed for first six months of 1924, 1925, and 1926—Comparison of rates for white and colored policyholders

[Industrial department, Metropolitan Life Insurance Co]

Cause of death	Death rates per 100,000 persons exposed					
	White			Colored		
	January-June, 1926	January-June, 1925	January-June, 1924	January-June, 1926	January-June, 1925	January-June, 1924
All causes of death	947.0	894.2	905.2	1,703.2	1,612.9	1,556.4
Typhoid fever	2.4	2.3	2.6	4.7	6.3	5.4
Measles	17.6	4.4	13.3	13.4	3.2	8.2
Scarlet fever	4.9	5.4	6.8	1.5	1.2	1.0
Whooping cough	10.8	7.1	7.7	14.0	13.7	13.1
Diphtheria and croup	9.9	12.7	16.7	6.4	5.3	4.8
Influenza	44.9	29.0	19.6	94.2	71.4	52.5
Meningococcus meningitis	.9	1.0	.8	.7	.7	1.1
Tuberculosis, all forms	86.4	88.9	96.6	247.8	239.2	246.6
Tuberculosis of respiratory system	76.0	77.9	86.0	217.0	208.3	223.2
Tuberculosis of meninges, etc	5.0	5.4	5.8	7.9	9.1	7.2
Other forms of tuberculosis	5.4	5.6	4.8	22.9	21.7	16.2
Cancer	72.8	70.7	70.7	69.0	72.8	73.4
Diabetes	17.8	16.9	16.0	16.7	15.9	15.4
Alcoholism	3.4	2.8	2.9	4.9	4.2	4.3
Cerebral hemorrhage, apoplexy	54.2	53.3	59.2	104.1	91.0	103.0
Organic diseases of the heart	139.5	128.1	124.0	226.0	232.1	214.4
Total respiratory diseases	137.7	118.0	122.8	284.5	239.0	243.2
Bronchitis	5.8	6.1	6.2	11.0	9.8	11.3
Bronchopneumonia	57.0	44.5	49.3	99.9	74.8	76.8
Pneumonia—lobar and undefined	66.8	58.9	58.2	160.1	139.3	141.9
Other diseases of respiratory system	8.1	8.4	9.1	13.4	15.0	13.2
Diarrhea and enteritis	17.6	19.8	20.9	20.6	27.1	18.7
Under 2 years	14.9	16.7	17.6	15.3	19.5	12.7
2 years and over	2.8	3.1	3.3	5.3	7.6	6.0
Acute nephritis	4.5	5.0	5.0	17.4	16.0	16.8
Chronic nephritis	70.7	67.6	64.8	141.0	131.9	115.5
Total puerperal state	15.5	17.0	17.6	25.2	25.5	26.9
Puerperal septicemia	5.9	6.5	6.7	11.7	11.6	10.0
Puerperal albuminuria and convulsions	3.4	3.8	4.6	6.1	5.6	7.2
Other diseases of puerperal state	6.2	6.8	6.3	7.4	8.3	9.7
Total external causes	65.1	70.8	66.6	113.7	109.9	100.9
Suicides	7.6	7.2	7.5	5.9	4.3	4.8
Homicides	3.0	3.5	2.7	34.1	33.0	31.5
Accidental and unspecified violence	54.5	60.1	56.3	73.7	72.6	64.6
Accidental drowning	4.0	4.6	4.9	3.5	5.2	1.4
Automobile accidents	14.2	13.6	12.9	13.5	11.3	11.7
All other and ill-defined causes of death	170.3	173.1	170.6	297.4	306.5	291.6

PUBLIC HEALTH ENGINEERING ABSTRACTS

Report of Committee on Bovine Diseases—Their Relation to the Milk Supply and to the Public Health. Dr. C D. Pearce, International Association of Dairy and Milk Inspectors Fourteenth Annual Report, October 12, 14, 1925, pp. 102–108. (Abstract by W. W. White.)

The United States Dairy Association estimates that from $100,000,000 to $130,000,000 was lost during the preceding year on account of bovine diseases among cattle. This does not include losses from parasites, exposure, and accidents.

A member of the committee, Dr. J. J. Fry, reports on the foot and mouth disease in California. During a period of five months, 23,086 herds of dairy cattle were condemned and slaughtered. No cases of the disease were reported in human beings and no transmission

occurred through the medium of dairy plant operation An outbreak of foot and mouth disease also occurred in Texas in September, 1924. Before the disease was stamped out, 148 herds in two counties had been slaughtered.

The most common disease in dairy cattle is grouped under the general term "mastitis." Physical examination by a competent veterinarian is of prime importance in educating dairymen regarding bovine diseases and their prevention, and in the disposition of undesirable cows.

As regards septic sore throat, it is still debatable as to whether it originates with cows or human beings.

The committee believes that bovine diseases and their relation to public health can be controlled by maintaining clean, healthy herds, producing clean wholesome milk, and by proper pasteurization of the milk

Report of Field Work Done by the Division of Milk Control During 1925. James R Kilborn, Laboratory Technician, Pennsylvania Department of Health Pennsylvania Association of Dairy and Milk Inspectors Second Annual Report, 1926, pp 74–76. (Abstract by J. R. Hoffert.)

In August, 1925, the Pennsylvania Department of Health placed a completely equipped motorized laboratory for testing the milk prepared and served in the communities of the State By cooperation with local officials, the milk supplies are tested for sedimentation, butter fat, specific gravity, keeping qualities, and bacterial counts, and pasteurization and other operations of milk plants are checked and the State milk laws enforced. Help is given in correcting defects noted and reinspections are made later. Material improvement in the milk supplies has already been noted.

DEATHS DURING WEEK ENDED AUGUST 7, 1926

Summary of information received by telegraph from industrial insurance companies for week ended August 7, 1926, and corresponding week of 1925. (From the Weekly Health Index, August 11, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Aug 7, 1926	Corresponding week 1925
Policies in force	64, 753, 385	60, 717, 279
Number of death claims	10, 159	9, 468
Death claims per 1,000 policies in force, annual rate	8.2	8.1

Deaths from all causes in certain large cities of the United States during the week ended August 7, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, August 7, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Aug 7, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Aug 7, 1926 [2]
	Total deaths	Death rate [1]		Week ended Aug 7, 1926	Corresponding week, 1925	
Total (65 cities)	5,837	10 6	10 7	717	830	[3] 58
Albany [4]	31	13 6	10 2	1	4	21
Atlanta	65			11	5	
White	28			6		
Colored	37	(5)		5		
Baltimore [4]	206	13 3	12 1	14	29	41
White	157			10		36
Colored	49	(5)		4		65
Birmingham	59	15 6	15 7	6	12	
White	28			3		
Colored	31	(5)		3		
Boston	150	9 9	12 0	18	26	51
Bridgeport	23			2	2	34
Buffalo	113	10 8	10 7	19	9	79
Cambridge	23	9 8	7 4	4	3	66
Camden	28	11 1	8.9	2	0	34
Canton	14	6 6	6.4	0	1	0
Chicago [4]	585	10 0	10 3	71	98	63
Cincinnati	132	16 7	15.2	18	14	112
Cleveland	168	9 1	8 2	21	16	54
Columbus	68	12 4	12 1	8	10	73
Dallas	47	12.3	10 2	12	8	
White	39			11		
Colored	8	(5)		1		
Dayton	21	6 2	9 6	4	4	63
Denver	60	11 0	14 1	3	11	
Des Moines	24	8 6	10 3	1	0	17
Detroit	243	9 8	9 1	40	51	64
Duluth	23	10 6	8 5	3	1	70
El Paso	18	8 6	14 9	5	9	
Erie	16			2	2	38
Fall River [4]	35	13 9	9 3	6	5	87
Flint	18	6 9	10 0	6	7	99
Fort Worth	26	8 5	6 5	5	3	
White	20			5		
Colored	6	(5)		0		
Grand Rapids	24	8 0	8 8	2	5	29
Houston	43			6	7	
White	36			6		
Colored	7	(5)		0		
Indianapolis	89	12 6	15 7	13	15	95
White	75			11		93
Colored	14	(5)		2		110
Jersey City	51	8 4	10 6	8	10	57
Kansas City, Kans	36	16 0	14 8	5	6	87
White	21			2		42
Colored	15	(5)		3		394
Kansas City, Mo	101	14.0	14.6	12	13	
Los Angeles	214			25	17	69
Lowell	26			3	3	56
Lynn	14	7.0	9 1	1	1	25
Memphis	66	19.4	12 6	11	3	
White	22			4		
Colored	44	(5)		7		
Milwaukee	87	8 8	8 2	7	6	32
Minneapolis	81	9 7	9 3	5	6	28
Nashville [4]	35	13.3	12 6	5	3	
White	16			3		
Colored	19	(5)		2		
New Bedford	23			6	7	104
New Haven	26	7.4	10 2	3	8	41

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births Cities left blank are not in the registration area for births
[3] Data for 62 cities.
[4] Deaths for week ended Friday, Aug 6, 1926
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta, 31, Baltimore, 15, Birmingham, 39, Dallas, 15, Forth Worth, 14, Houston, 25, Indianapolis, 11, Kansas City, Kans., 14, Memphis, 38; Nashville, 30; New Orleans, 26; Norfolk, 38; Richmond, 32, and Washington, D. C , 25.

Deaths from all causes in certain large cities of the United States during the week ended August 7, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, August 7, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Aug 7, 1926: Total deaths	Week ended Aug 7, 1926: Death rate	Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year: Week ended Aug 7, 1926	Deaths under 1 year: Corresponding week, 1925	Infant mortality rate, week ended Aug 7, 1926
New Orleans	141	17.5	17.4	17	23	
White	84			12		
Colored	57	(5)		5		
New York	1,121	9.9	9.8	131	149	53
Bronx Borough	144	8.3	8.7	11	15	36
Brooklyn Borough	338	7.9	7.6	45	46	46
Manhattan Borough	504	14.0	12.5	58	69	64
Queens Borough	105	7.2	8.2	11	12	50
Richmond Borough	30	10.9	22.2	6	7	105
Newark, N. J.	93	10.6	8.6	17	11	81
Norfolk	44	13.2	8.0	12	2	223
White	21			4		119
Colored	23	(5)		8		398
Oakland	38	7.6	5.1	4	1	46
Oklahoma City	21			4	5	
Omaha	48	11.6	12.6	7	14	73
Paterson	29	10.6	11.4	3	3	52
Philadelphia	390	10.1	10.5	56	62	74
Pittsburgh	148	12.1	12.3	21	18	70
Portland, Oreg.	66			4	2	41
Providence	40	7.6	7.4	6	7	50
Richmond	49	13.5	11.7	9	5	113
White	27			2		39
Colored	22	(5)		7		245
Rochester	66	10.7	9.2	3	7	24
St. Louis	180	11.3	13.3	25	38	
St. Paul	43	9.0	8.9	3	6	27
Salt Lake City [4]	26	10.2	10.4	2	1	28
San Antonio	55	14.0	14.5	9	13	
San Diego	24	11.4	12.3	2	1	42
San Francisco	123	11.3	10.9	6	7	36
Schenectady	19	10.7	9.0	1	1	29
Seattle	60			3	5	28
Somerville	12	6.3	7.4	4	3	104
Spokane	25	12.0	7.2	1	1	23
Springfield, Mass.	27	9.7	11.4	1	2	14
Syracuse	36	10.2	11.7	5	6	63
Tacoma	27	13.3	15.0	2	1	47
Toledo	55	9.8	10.9	5	12	48
Trenton	19	7.4	10.7	0	1	0
Utica	29	14.7	11.8	1	5	22
Washington, D. C.	125	12.3	14.5	16	12	91
White	66			7		58
Colored	59	(5)		9		164
Waterbury	22			5	4	107
Wilmington, Del.	18	7.6	8.5	4	5	94
Worcester	30	8.1	12.0	0	3	0
Yonkers	21	9.4	4.6	2	2	45
Youngstown	34	10.7	11.7	3	11	38

[4] Deaths for week ended Friday, Aug. 6, 1926.

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31, Baltimore, 15, Birmingham, 39, Dallas, 15, Fort Worth, 14, Houston, 25, Indianapolis, 11, Kansas City, Kans., 14; Memphis, 38, Nashville, 30, New Orleans, 26, Norfolk, 38, Richmond, 32; and Washington, D. C., 25

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended August 14, 1926

ALABAMA

	Cases
Chicken pox	3
Diphtheria	9
Influenza	3
Malaria	51
Measles	11
Mumps	5
Pellagra	10
Pneumonia	13
Poliomyelitis	2
Scarlet fever	10
Smallpox	6
Tuberculosis	33
Typhoid fever	107
Whooping cough	26

ARIZONA

	Cases
Diphtheria	5
Measles	2
Mumps	2
Paratyphoid fever	1
Scarlet fever	8
Tuberculosis	4
Typhoid fever	4
Whooping cough	10

ARKANSAS

	Cases
Chicken pox	3
Diphtheria	3
Influenza	32
Malaria	107
Measles	2
Mumps	5
Ophthalmia neonatorum	1
Pellagra	22
Scarlet fever	6
Smallpox	2
Trachoma	6
Tuberculosis	7
Typhoid fever	67
Whooping cough	33

CALIFORNIA

	Cases
Botulism—San Joaquin County	1
Cerebrospinal meningitis	
Long Beach	1
Oakland	1
Sacramento	1
Chicken pox	32
Diphtheria	55
Influenza	3
Measles	103
Mumps	44
Paratyphoid fever	1
Poliomyelitis	
Los Angeles	3
Pasadena	1
Rabies (human)—Los Angeles County	1
Scarlet fever	46
Smallpox	11
Tuberculosis	151
Typhoid fever	19
Whooping cough	67

COLORADO

	Cases
Chicken pox	1
Diphtheria	14
Impetigo contagiosa	1
Malaria	1
Measles	2
Scarlet fever	4
Smallpox	1
Tuberculosis	42
Typhoid fever	14
Whooping cough	16

CONNECTICUT

	Cases
Chicken pox	5
Diphtheria	14
Dysentery (bacillary)	1
German measles	1
Influenza	4
Measles	15
Mumps	4

CONNECTICUT—continued

	Cases
Pneumonia (broncho)	15
Pneumonia (lobar)	15
Poliomyelitis	1
Scarlet fever	14
Septic sore throat	192
Tuberculosis (all forms)	46
Typhoid fever	13
Whooping cough	37

DELAWARE

Scarlet fever	1
Tuberculosis	1
Typhoid fever	1
Whooping cough	2

FLORIDA

Chicken pox	3
Dengue	1
Diphtheria	11
Influenza	1
Malaria	7
Measles	16
Mumps	9
Pneumonia	10
Poliomyelitis	2
Scarlet fever	7
Smallpox	17
Tetanus	2
Tuberculosis	11
Typhoid fever	23
Typhus fever	2
Whooping cough	5

GEORGIA

Cerebrospinal meningitis	1
Chicken pox	1
Dengue	1
Diphtheria	12
Dysentery	5
Hookworm disease	4
Influenza	20
Malaria	73
Measles	2
Mumps	5
Paratyphoid fever	3
Pellagra	2
Pneumonia	12
Scarlet fever	5
Septic sore throat	6
Smallpox	14
Tuberculosis	13
Typhoid fever	77
Whooping cough	11

IDAHO

Chicken pox	3
Diphtheria	3
Influenza	1
Measles	5
Mumps	2
Scarlet fever	7
Smallpox	2
Tuberculosis	1
Typhoid fever	6
Whooping cough	3

ILLINOIS

	Cases
Chicken pox	45
Diphtheria	49
Influenza	86
Lethargic encephalitis	
Cook County	1
Tazewell County	1
White County	1
Measles	130
Mumps	24
Pneumonia	171
Poliomyelitis	
Fulton County	1
Lawrence County	1
Madison County	1
Scarlet fever	73
Smallpox	7
Tuberculosis	225
Typhoid fever	43
Whooping cough	158

INDIANA

Chicken pox	5
Diphtheria	15
Influenza	9
Measles	26
Pneumonia	1
Poliomyelitis	1
Scarlet fever	32
Smallpox	15
Tuberculosis	31
Typhoid fever	13
Whooping cough	58

IOWA

Diphtheria	17
German measles	1
Measles	4
Mumps	1
Poliomyelitis	1
Scarlet fever	7
Smallpox	4
Tuberculosis	11
Typhoid fever	16
Whooping cough	12

KANSAS

Cerebrospinal meningitis—Topeka	1
Chicken pox	5
Diphtheria	13
Dysentery (acute)	1
German measles	2
Measles	10
Mumps	3
Pneumonia	1
Scarlet fever	17
Smallpox	1
Tetanus	1
Tuberculosis	35
Typhoid fever	18
Whooping cough	51

LOUISIANA

Diphtheria	9
Influenza	18
Malaria	19
Pneumonia	44
Poliomyelitis	2

LOUISIANA—continued

	Cases
Scarlet fever	3
Smallpox	12
Tuberculosis	32
Typhoid fever	46
Whooping cough	7

MAINE

Chicken pox	1
Diphtheria	1
German measles	1
Measles	28
Mumps	6
Pneumonia	1
Scarlet fever	11
Tetanus	1
Tuberculosis	18
Typhoid fever	3
Whooping cough	23

MARYLAND [1]

Chicken pox	1
Diphtheria	13
Dysentery	19
Influenza	1
Lethargic encephalitis	1
Malaria	3
Measles	28
Mumps	6
Ophthalmia neonatorum	2
Paratyphoid fever	9
Pneumonia (broncho)	10
Pneumonia (lobar)	10
Poliomyelitis	3
Scarlet fever	11
Tuberculosis	55
Typhoid fever	33
Vincent's angina	1
Whooping cough	112

MASSACHUSETTS

Anthrax	1
Chicken pox	28
Conjunctivitis (suppurative)	2
Diphtheria	32
German measles	17
Measles	82
Mumps	40
Ophthalmia neonatorum	38
Pneumonia (lobar)	17
Poliomyelitis	19
Scarlet fever	79
Septic sore throat	6
Tetanus	1
Tuberculosis (pulmonary)	129
Tuberculosis (other forms)	35
Typhoid fever	12
Whooping cough	136

MICHIGAN

Diphtheria	73
Measles	61
Pneumonia	12
Scarlet fever	78
Smallpox	15
Tuberculosis	48
Typhoid fever	17
Whooping cough	131

[1] Week ended Friday.

MINNESOTA

	Cases
Chicken pox	10
Diphtheria	20
Influenza	1
Measles	23
Poliomyelitis	1
Scarlet fever	57
Smallpox	3
Tuberculosis	69
Typhoid fever	14
Whooping cough	21

MISSISSIPPI

Diphtheria	8
Scarlet fever	4
Smallpox	14
Typhoid fever	59

MISSOURI

Cerebrospinal meningitis	1
Chicken pox	3
Diphtheria	19
Measles	15
Mumps	3
Ophthalmia neonatorum	2
Pneumonia	1
Rabies	1
Scarlet fever	53
Smallpox	2
Tetanus	1
Trachoma	8
Tuberculosis	30
Typhoid fever	32
Whooping cough	31

MONTANA

Cerebrospinal meningitis	1
Diphtheria	4
Measles	3
Poliomyelitis	2
Rocky Mountain spotted fever	1
Scarlet fever	7
Smallpox	11
Tuberculosis	4
Typhoid fever	4
Whooping cough	4

NEBRASKA

Chicken pox	3
German measles	1
Measles	2
Mumps	1
Scarlet fever	7
Smallpox	4
Tetanus	1
Whooping cough	14

NEW JERSEY

Chicken pox	21
Diphtheria	37
Dysentery	3
Influenza	8
Measles	33
Paratyphoid fever	1
Pneumonia	21
Scarlet fever	45
Trachoma	1
Typhoid fever	19
Whooping cough	107

NEW MEXICO

	Cases
Conjunctivitis	1
Measles	2
Mumps	10
Pneumonia	2
Tuberculosis	20
Typhoid fever	14
Whooping cough	6

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	1
Chicken pox	32
Diphtheria	49
Dysentery	2
German measles	19
Lethargic encephalitis	1
Malaria	6
Measles	180
Mumps	43
Pneumonia	60
Poliomyelitis	34
Scarlet fever	33
Septic sore throat	1
Smallpox	1
Tetanus	2
Typhoid fever	22
Vincent's angina	19
Whooping cough	244

NORTH CAROLINA

Cerebrospinal meningitis	2
Chicken pox	9
Diphtheria	30
Dysentery (bacillary)	7
German measles	7
Malaria	13
Measles	49
Poliomyelitis	7
Scarlet fever	23
Septic sore throat	1
Smallpox	57
Typhoid fever	89
Whooping cough	295

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Cerebrospinal meningitis	5
Diphtheria	6
Influenza	41
Malaria	100
Measles	19
Pellagra	16
Pneumonia	7
Scarlet fever	12
Smallpox	13
Typhoid fever	124
Whooping cough	26

OREGON

Chicken pox	1
Diphtheria	10
Influenza	9
Malaria	1
Measles	6

[2] Deaths

OREGON—continued

	Cases
Mumps	12
Pneumonia	[2] 5
Scarlet fever	9
Smallpox	6
Trachoma	1
Tuberculosis	32
Typhoid fever	8
Whooping cough	8

PENNSYLVANIA

Cerebrospinal meningitis—Philadelphia	1
Chicken pox	61
Diphtheria	111
German measles	7
Impetigo contagiosa	3
Lethargic encephalitis—Philadelphia	1
Measles	208
Mumps	17
Ophthalmia neonatorum	
Philadelphia	2
Reading	1
Pneumonia	8
Poliomyelitis—Titusville	1
Scabies	1
Scarlet fever	101
Smallpox	1
Trachoma—Philadelphia	1
Tuberculosis	103
Typhoid fever	37
Whooping cough	418

SOUTH DAKOTA

Chicken pox	1
Diphtheria	1
Measles	4
Scarlet fever	10
Tuberculosis	1
Typhoid fever	3
Whooping cough	3

TENNESSEE

Cerebrospinal meningitis	
Memphis	1
Williamson County	1
Chicken pox	4
Diphtheria	10
Dysentery	7
Influenza	8
Malaria	64
Measles	27
Ophthalmia neonatorum	3
Pellagra	13
Pneumonia	3
Scarlet fever	9
Smallpox	3
Tuberculosis	35
Typhoid fever	146
Whooping cough	91

TEXAS

Chicken pox	8
Dengue	2
Diphtheria	8
Influenza	7
Measles	1

TEXAS—continued

	Cases
Mumps	3
Pneumonia	1
Scarlet fever	13
Smallpox	31
Tuberculosis	20
Typhoid fever	37
Whooping cough	47

UTAH

	Cases
Cerebrospinal meningitis—Salt Lake City	1
Chicken pox	3
Diphtheria	6
Measles	6
Mumps	8
Pneumonia	3
Poliomyelitis—Bountiful	1
Typhoid fever	3
Whooping cough	44

VERMONT

	Cases
Chicken pox	1
Diphtheria	1
Measles	7
Poliomyelitis	1
Scarlet fever	1
Typhoid fever	1
Whooping cough	21

WASHINGTON

	Cases
Chicken pox	7
Diphtheria	16
Dysentery	1
German measles	6
Measles	13
Mumps	4
Scarlet fever	14
Smallpox	35
Tuberculosis	31
Typhoid fever	3
Whooping cough	33

WEST VIRGINIA

	Cases
Cerebrospinal meningitis—Follansbee	1
Chicken pox	5
Diphtheria	15
Influenza	13
Measles	48
Poliomyelitis—Bluefield	1
Scarlet fever	19
Smallpox	3
Tuberculosis	33
Typhoid fever	38
Whooping cough	83

WISCONSIN

	Cases
Milwaukee	
Cerebrospinal meningitis	1
Chicken pox	12
Diphtheria	7
German measles	1
Measles	22
Mumps	3
Pneumonia	5
Scarlet fever	5
Whooping cough	86
Scattering	
Cerebrospinal meningitis	1
Chicken pox	15
Diphtheria	22
German measles	7
Influenza	1
Measles	184
Mumps	7
Pneumonia	9
Scarlet fever	37
Smallpox	2
Tuberculosis	26
Typhoid fever	3
Whooping cough	128

WYOMING

	Cases
Chicken pox	1
Measles	3
Scarlet fever	6
Tuberculosis	1
Typhoid fever	1

Reports for Week Ended August 7, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	4
Diphtheria	6
Measles	1
Pneumonia	7
Scarlet fever	8
Tuberculosis	34
Typhoid fever	4
Whooping cough	22

NORTH DAKOTA

	Cases
Chicken pox	2
Diphtheria	7
Lethargic encephalitis	1
Measles	25
Mumps	3
Pneumonia	2
Poliomyelitis	1

NORTH DAKOTA—continued

	Cases
Scarlet fever	11
Trachoma	1
Tuberculosis	10
Typhoid fever	1
Whooping cough	16

SOUTH CAROLINA

	Cases
Chicken pox	13
Diphtheria	5
Influenza	49
Measles	4
Paratyphoid fever	7
Poliomyelitis	5
Scarlet fever	2
Smallpox	14
Typhoid fever	157
Whooping cough	64

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
June, 1926										
South Dakota	2	10	8		184		1	234	25	8
Wyoming	1	7	1		39		0	56	2	3
July, 1926										
Arizona		6			16		0	12	0	9
Connecticut	2	47	2	4	394		1	121	0	23
New Mexico	0	16			9	5	0	6	0	30
Wisconsin	5	136	48		3,905		3	281	21	19

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended July 31, 1926, 37 States reported 759 cases of diphtheria For the week ended August 1, 1925, the same States reported 799 cases of this disease. Ninety-seven cities, situated in all parts of the country and having an aggregate population of more than 29,900,000, reported 464 cases of diphtheria for the week ended July 31, 1926. Last year for the corresponding week they reported 424 cases. The estimated expectancy for these cities was 552 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics

Measles.—Thirty-four States reported 2,052 cases of measles for the week ended July 31, 1926, and 668 cases of this disease for the week ended August 1, 1925. Ninety-seven cities reported 594 cases of measles for the week this year, and 401 cases last year.

Poliomyelitis —The health officers of 38 States reported 66 cases of poliomyelitis for the week ended July 31, 1926. The same States reported 226 cases for the week ended August 1, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-seven States—this year, 946 cases; last year, 692 cases, 97 cities—this year, 420 cases; last year, 308 cases; estimated expectancy, 261 cases

Smallpox —For the week ended July 31, 1926, 37 States reported 186 cases of smallpox Last year for the corresponding week they reported 174 cases. Ninety-seven cities reported smallpox for the week as follows: 1926, 28 cases; 1925, 53 cases; estimated expectancy, 39 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever —Nine hundred and twenty-four cases of typhoid fever were reported for the week ended July 31, 1926, by 37 States. For the corresponding week of 1925 the same States reported 1,141

cases of this disease. Ninety-seven cities reported 172 cases of typhoid fever for the week this year and 220 cases for the corresponding week last year. The estimated expectancy for these cities was 191 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 91 cities, with a population of more than 29,600,000, as follows: 1926, 285 deaths; 1925, 331 deaths.

City reports for week ended July 31, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	1	1	0	0	0	0	0	0
New Hampshire									
Concord	22,546	0	0	0	0	0	5	0	1
Manchester	83,097	0	0	0	0	0	2	0	0
Vermont									
Barre	10,008	0	0	0	0	0	0	0	0
Burlington	24,089	0	1	0	0	0	0	0	0
Massachusetts:									
Boston	779,620	16	34	8	1	0	20	14	9
Fall River	128,993	0	3	1	0	0	0	0	0
Springfield	142,065	2	1	0	0	0	1	0	0
Worcester	190,757	2	2	2	0	0	0	0	1
Rhode Island									
Pawtucket	69,760	0	0	0	0	0	0	0	0
Providence	267,918	0	3	3	0	0	5	0	2
Connecticut:									
Bridgeport	(1)	1	4	3	0	0	0	0	0
Hartford	160,197	0	2	0	0	0	1	0	0
New Haven	178,927	1	1	0	0	0	3	0	1
MIDDLE ATLANTIC									
New York:									
Buffalo	538,016	8	9	16	0	0	1	0	4
New York	5,873,356	39	142	128	9	1	27	26	51
Rochester	316,786	1	5	3	0	0	8	0	2
Syracuse	182,003	2	3	2	0	0	35	7	3
New Jersey:									
Camden	128,642	3	2	2	0	0	1	0	0
Newark	452,513	3	8	3	0	0	3	4	2
Trenton	132,020	0	2	2	1	0	3	0	0
Pennsylvania									
Philadelphia	1,979,364	20	37	39	-------	0	28	1	14
Pittsburgh	631,563	9	14	12	-------	1	21	0	7
Reading	112,707	3	2	0	-------	0	0	1	0

[1] No estimate made

City reports for week ended July 31, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	1	6	3	1	0	17	1	2
Cleveland	936,485	37	17	26	0	0	4	5	8
Columbus	279,836	0	2	3	0	0	1	0	4
Toledo	287,380	8	4	1	0	0	16	0	2
Indiana									
Fort Wayne	97,846	0	2	0	0	0	3	0	1
Indianapolis	358,819	2	5	2	0	0	1	0	3
South Bend	80,091	0	0	1	0	0	10	0	1
Terre Haute	71,071	0	0	1	0	0	1	0	0
Illinois									
Chicago	2,995,239	58	62	42	1	0	115	10	29
Peoria	81,564	0	1	0	0	0	3	2	1
Springfield	63,923	2	0	0	0	0	1	0	2
Michigan									
Detroit	1,245,824	13	25	27	0	1	5	3	10
Flint	130,316	1	3	1	0	0	13	1	0
Grand Rapids	153,698	0	2	1	0	0	6	0	1
Wisconsin									
Kenosha	50,891	0	1	0	0	0	30	0	0
Madison	46,385	0	0	0	0	0	1	0	1
Milwaukee	509,192	19	10	14	1	1	61	5	6
Racine	67,707	0	0	1	0	0	12	0	0
Superior	39,671	0	0	0	0	0	0	0	2
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	2	1	0	0	0	8	0	3
Minneapolis	425,435	8	10	11	0	0	3	0	3
St Paul	246,001	1	10	5	0	0	14	0	5
Iowa									
Davenport	52,469	0	1	0	0	--------	0	0	--------
Des Moines	141,441	0	2	1	0	--------	0	0	--------
Sioux City	76,411	0	1	3	0	--------	2	0	--------
Waterloo	36,771	4	0	1	0	--------	4	0	--------
Missouri									
Kansas City	367,481	1	2	2	0	0	0	0	6
St Joseph	78,342	0	1	1	0	0	0	0	0
St Louis	821,543	1	17	19	0	0	10	1	--------
North Dakota									
Fargo	26,403	0	0	0	0	0	1	0	1
South Dakota									
Aberdeen	15,036	0	0	1	0	--------	3	0	--------
Sioux Falls	30,127	--------	0	--------	--------	--------	--------	--------	--------
Nebraska									
Lincoln	60,941	2	0	1	0	0	0	1	0
Omaha	211,768	0	4	0	0	0	3	0	7
Kansas									
Topeka	55,411	0	1	0	0	0	0	0	0
Wichita	88,367	0	1	0	0	0	1	0	2
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	1	0	0	0	0	0	0
Maryland									
Baltimore	796,296	7	11	3	0	0	19	10	10
Cumberland	33,741	0	1	0	0	0	1	0	0
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia									
Washington	497,906	6	4	3	0	0	6	0	5
Virginia									
Lynchburg	30,395	0	0	0	0	0	1	2	0
Norfolk	(1)	--------	0	--------	--------	--------	--------	--------	--------
Richmond	186,403	0	2	1	0	0	9	1	0
Roanoke	58,208	0	0	0	0	0	0	0	1
West Virginia									
Charleston	49,019	0	1	0	0	0	3	0	1
Wheeling	56,208	0	0	2	0	0	1	0	0
North Carolina									
Raleigh	30,371	0	0	0	0	0	2	0	0
Wilmington	37,061	0	0	0	0	1	0	0	0
Winston-Salem	69,031	0	0	0	0	0	10	1	1

[1] No estimate made

City reports for week ended July 31, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
SOUTH ATLANTIC—contd									
South Carolina									
Charleston	73,125	0	0	0	3	0	0	0	1
Columbia	41,225	3	1	0	0	0	0	0	0
Greenville	27,311	0	0	1	0	0	0	0	0
Georgia									
Atlanta	(1)	0	2	0	6	0	4	0	3
Brunswick	16,809	0	0	0	0	0	0	0	1
Savannah	93,134	0	1	0	1	0	1	0	2
Florida									
Miami	69,754	0	....	3	0	0	0	3	1
St Petersburg	26,847	....	0	....	....	0	....	....	0
Tampa	94,743	0	0	1	0	0	1	0	2
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	1	0	0	0	0	0	2
Louisville	305,935	3	2	1	0	1	1	1	5
Tennessee									
Memphis	174,533	2	2	0	0	0	3	0	1
Nashville	136,220	0	1	1	0	0	0	0	1
Alabama									
Birmingham	205,670	0	1	1	0	0	14	0	3
Mobile	65,955	....	0	....	....	....	....	....	....
Montgomery	46,481	0	0	0	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	0	0	0	....	0	0	....
Little Rock	74,216	0	0	0	0	0	0	0	0
Louisiana									
New Orleans	414,493	0	5	4	4	4	0	0	6
Shreveport	57,857	0	0	1	0	0	0	0	2
Oklahoma									
Oklahoma City	(1)	0	1	0	0	0	2	0	3
Texas									
Dallas	194,450	2	2	2	0	1	0	0	3
Galveston	48,375	0	0	0	0	0	0	0	0
Houston	164,954	0	1	1	0	0	1	0	1
San Antonio	198,069	0	0	1	0	0	1	0	4
MOUNTAIN									
Montana									
Billings	17,971	0	0	0	0	0	0	0	0
Great Falls	29,883	0	1	0	0	0	0	2	0
Helena	12,037	0	0	1	0	0	0	0	0
Missoula	12,668	0	0	0	0	0	0	0	1
Idaho									
Boise	23,042	0	0	0	0	0	0	0	0
Colorado									
Denver	280,911	11	9	1	....	0	12	0	4
Pueblo	43,787	0	1	1	0	0	0	0	1
New Mexico									
Albuquerque	21,000	0	0	0	0	0	0	0	1
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	1
Utah									
Salt Lake City	130,948	0	2	7	0	0	2	3	0
Nevada									
Reno	12,665	1	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	3	4	1	0	....	12	1	....
Spokane	108,897	5	0	10	0	....	0	0	....
Tacoma	104,455	4	1	4	0	0	1	0	3
Oregon									
Portland	282,383	3	4	4	0	0	7	0	1
California									
Los Angeles	(1)	8	27	21	0	0	6	6	14
Sacramento	72,260	0	2	2	0	0	1	0	2
San Francisco	557,530	1	11	6	1	1	19	1	1

[1] No estimate made

City reports for week ended July 31, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	1	1	0	0	0	1	1	0	0	1	13
New Hampshire											
Concord	1	0	0	0	0	1	0	0	0	0	9
Manchester	0	2	0	0	0	0	0	0	0	1	17
Vermont											
Barre	0	0	0	0	0	1	0	0	0	0	3
Burlington	0	0	0	0	0	0	0	0	0	0	2
Massachusetts											
Boston	14	30	0	0	0	19	2	4	1	30	196
Fall River	1	3	0	0	0	2	1	1	0	10	23
Springfield	1	1	0	0	0	2	1	0	0	0	27
Worcester	1	6	0	0	0	3	1	0	0	2	46
Rhode Island											
Pawtucket	0	0	0	0	0	1	0	0	1	0	20
Providence	3	0	0	0	0	1	0	0	1	29	54
Connecticut											
Bridgeport	2	2	0	0	0	0	1	1	0	0	22
Hartford	1	5	0	0	0	2	1	0	0	7	35
New Haven	1	2	0	0	0	0	2	0	0	5	32
MIDDLE ATLANTIC											
New York											
Buffalo	7	5	0	0	0	5	2	1	0	16	122
New York	35	66	0	1	0	[1] 98	30	30	3	80	1,155
Rochester	4	0	0	0	0	0	1	5	0	8	61
Syracuse	3	0	0	0	0	0	1	0	0	31	36
New Jersey											
Camden	0	4	0	0	0	4	1	1	0	3	35
Newark	5	4	0	0	0	7	2	1	0	47	74
Trenton	0	1	0	0	0	5	1	1	0	0	36
Pennsylvania											
Philadelphia	20	15	0	0	0	42	10	7	1	65	461
Pittsburgh	10	9	0	0	0	10	3	0	0	43	138
Reading	0	1	0	0	0	3	1	0	0	7	29
EAST NORTH CENTRAL											
Ohio											
Cincinnati	3	6	0	0	0	12	2	2	1	4	128
Cleveland	7	21	2	4	0	10	4	2	0	105	147
Columbus	2	1	0	1	0	8	1	0	0	9	84
Toledo	4	3	1	0	0	7	2	2	0	77	68
Indiana											
Fort Wayne	1	0	0	1	0	3	1	0	0	4	19
Indianapolis	2	5	1	1	0	4	2	1	1	32	93
South Bend	0	1	0	0	0	1	0	0	0	4	7
Terre Haute	1	0	0	0	0	0	1	0	0	0	17
Illinois											
Chicago	28	33	1	2	0	43	5	3	2	53	540
Peoria	0	0	0	0	0	1	1	1	0	6	18
Springfield	1	0	1	0	0	1	0	0	0	5	25
Michigan											
Detroit	24	41	3	0	0	19	5	6	1	77	212
Flint	2	5	0	0	0	1	1	0	0	9	17
Grand Rapids	2	4	1	0	0	3	1	1	0	6	28
Wisconsin											
Kenosha	1	0	1	0	0	1	1	0	1	12	9
Madison	0	2	0	0	0	1	0	0	0	1	5
Milwaukee	9	5	1	0	0	7	0	0	0	97	102
Racine	1	0	0	0	0	1	0	0	0	10	2
Superior	1	1	1	0	0	0	0	0	0	0	12

[1] Pulmonary tuberculosis only.

City reports for week ended July 31, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL											
Minnesota											
Duluth	3	14	1	0	0	0	0	0	0	6	15
Minneapolis	8	26	2	0	0	3	1	1	0	2	88
St Paul	5	14	2	0	0	3	1	2	0	27	42
Iowa											
Davenport	0	0	0	0	-------	-------	0	0	-------	0	-------
Des Moines	1	0	0	0	-------	-------	0	0	-------	0	-------
Sioux City	0	4	0	2	-------	-------	0	0	-------	3	-------
Waterloo	0	0	0	0	-------	-------	1	0	-------	4	-------
Missouri											
Kansas City	2	0	0	0	0	8	2	2	1	3	87
St Joseph	0	0	0	0	0	1	0	0	0	0	23
St Louis	6	6	2	0	0	10	7	4	0	30	209
North Dakota											
Fargo	0	2	0	0	0	0	0	1	0	7	4
South Dakota											
Aberdeen	1	0	0	0	-------	-------	0	0	-------	3	-------
Sioux Falls	0	-------	0	-------	-------	-------	0	-------	-------	-------	-------
Nebraska											
Lincoln	1	0	0	1	0	0	1	0	0	5	13
Omaha	1	4	3	0	0	2	0	1	0	1	54
Kansas											
Topeka	0	0	0	0	0	0	1	0	0	16	13
Wichita	1	1	0	0	0	0	2	0	0	18	16
SOUTH ATLANTIC											
Delaware											
Wilmington	0	0	0	0	0	0	0	0	0	3	24
Maryland:											
Baltimore	5	3	0	0	0	14	8	6	0	89	225
Cumberland	0	0	0	0	0	1	0	2	0	0	10
Frederick	0	0	0	0	0	0	0	0	0	0	-------
District of Col											
Washington	3	4	0	0	0	5	5	2	0	20	84
Virginia											
Lynchburg	0	2	0	0	0	0	2	5	1	9	14
Norfolk	0	-------	0	-------	-------	-------	3	-------	-------	-------	-------
Richmond	2	2	0	0	0	3	2	3	0	1	40
Roanoke	0	0	0	0	0	1	1	0	0	0	14
West Virginia											
Charleston	0	0	0	0	0	0	1	0	0	3	10
Wheeling	1	2	0	0	0	0	0	1	0	0	12
North Carolina											
Raleigh	1	0	0	0	0	3	1	0	0	7	12
Wilmington	0	1	0	0	0	1	0	0	0	38	11
Winston-Salem	0	0	0	0	0	0	3	0	0	0	13
South Carolina											
Charleston	0	0	0	0	0	1	2	0	0	1	24
Columbia	1	0	0	0	0	0	1	4	0	0	-------
Greenville	0	0	0	0	0	0	2	0	1	5	4
Georgia:											
Atlanta	1	2	2	1	0	4	3	3	1	2	75
Brunswick	0	1	0	0	0	1	1	0	0	1	6
Savannah	0	0	0	0	0	3	2	2	0	3	22
Florida:											
Miami	-------	1	-------	0	0	0	-------	0	0	8	21
St Petersburg	0	-------	0	-------	0	0	1	1	1	-------	6
Tampa	0	0	0	0	0	0	0	1	1	0	31
EAST SOUTH CENTRAL											
Kentucky											
Covington	0	0	0	0	0	2	1	0	0	0	19
Louisville	1	7	0	0	0	8	5	3	1	2	93
Tennessee											
Memphis	0	5	0	0	0	4	6	9	0	5	57
Nashville	0	0	0	0	0	0	8	15	3	15	64
Alabama.											
Birmingham	1	0	1	1	0	2	6	15	2	10	56
Mobile	0	-------	0	-------	-------	-------	1	-------	-------	-------	-------
Montgomery	0	0	0	0	0	0	2	5	0	3	19

City reports for week ended July 31, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	0	0	0	0	------	------	1	0	------	11	------
Little Rock	0	1	0	0	0	3	3	0	0	0	4
Louisiana											
New Orleans	1	3	0	0	0	8	5	3	0	3	121
Shreveport	1	0	0	0	0	3	2	1	0	0	28
Oklahoma											
Oklahoma City	1	2	0	0	0	1	3	4	1	0	24
Texas											
Dallas	1	3	0	1	0	4	4	3	1	1	56
Galveston	0	0	0	0	0	1	0	0	0	0	10
Houston	1	1	0	0	0	5	1	1	0	0	48
San Antonio	1	1	0	0	0	6	1	3	1	0	64
MOUNTAIN											
Montana											
Billings	0	0	1	0	0	0	0	0	0	0	6
Great Falls	0	0	0	0	0	0	1	0	0	6	3
Helena	0	0	1	0	0	0	0	0	0	0	3
Missoula	0	0	0	0	0	0	0	0	0	0	10
Idaho											
Boise	0	0	0	1	0	0	0	0	0	0	6
Colorado											
Denver	4	3	1	0	0	11	2	1	0	19	65
Pueblo	1	1	0	0	0	0	0	0	0	0	4
New Mexico											
Albuquerque	0	0	0	0	0	4	0	1	0	0	13
Arizona											
Phoenix	------	0	0	0	0	5	0	0	0	0	18
Utah											
Salt Lake City	1	0	0	0	0	0	1	1	0	26	15
Nevada											
Reno	0	0	1	0	0	0	0	2	0	0	0
PACIFIC											
Washington											
Seattle	2	3	2	2	------	------	1	0	------	7	------
Spokane	1	9	3	0	------	------	0	2	------	17	------
Tacoma	1	1	1	3	0	0	0	0	0	2	21
Oregon											
Portland	2	10	5	5	0	4	1	1	0	2	57
California											
Los Angeles	6	15	3	7	0	33	5	1	0	15	221
Sacramento	1	1	1	0	0	2	1	0	0	0	16
San Francisco	4	3	1	0	0	7	2	1	0	1	121

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis (infantile paralysis): Cases	Poliomyelitis (infantile paralysis): Deaths
NEW ENGLAND									
Massachusetts									
Boston	4	3	0	0	0	0	1	1	1
Worcester	0	0	1	0	2	0	0	5	1
MIDDLE ATLANTIC									
New York									
Buffalo	0	0	0	0	0	0	0	3	1
New York	3	2	6	2	0	0	5	6	0
Syracuse	0	0	0	0	0	0	1	7	3
New Jersey.									
Newark	2	0	0	0	0	0	0	0	0
Pennsylvania									
Philadelphia	0	1	0	0	0	0	0	0	0
Pittsburgh	0	1	0	0	0	0	0	0	0

City reports for week ended July 31, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio									
Cincinnati	1	1	1	0	0	0	0	0	0
Cleveland	2	0	0	0	0	0	1	0	0
Columbus	0	1	0	0	0	0	0	0	0
Illinois									
Chicago	0	1	1	0	0	0	2	1	0
Springfield	0	0	0	0	0	0	0	0	1
Michigan									
Detroit	1	0	1	0	0	0	1	1	0
WEST NORTH CENTRAL									
Minnesota									
St Paul	0	0	0	0	0	0	0	1	0
Missouri									
St Louis [1]	1	0	0	0	0	0	1	0	0
Kansas									
Topeka	0	0	0	0	0	0	0	1	0
SOUTH ATLANTIC									
Maryland									
Baltimore	0	0	4	2	0	0	1	3	0
North Carolina									
Raliegh	0	0	0	0	0	1	0	0	0
Wilmington	0	0	0	0	1	0	0	0	0
Winston-Salem	0	0	0	0	1	1	0	0	0
South Carolina									
Charleston	0	0	0	0	4	0	0	1	0
Georgia									
Atlanta [2]	0	0	0	0	0	1	0	0	0
Savannah	0	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL									
Tennessee									
Memphis	0	0	0	0	1	1	0	0	0
Alabama									
Montgomery	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	1	0	0	0
Louisiana									
New Orleans	0	0	0	0	4	4	1	0	0
Shreveport	0	0	0	0	0	1	0	0	0
Oklahoma									
Oklahoma City	0	0	0	0	2	0	0	0	0
Texas									
Dallas [3]	0	0	1	1	1	1	0	0	0
Houston	0	0	0	0	0	1	0	0	0
San Antonio	0	0	0	0	0	1	0	0	0
PACIFIC									
Washington									
Spokane	1	0	0	0	0	0	0	0	0
California									
Los Angeles [3]	0	0	0	0	0	0	0	1	0

[1] Typhus fever, 2 cases, 1 death, at Kansas City, Mo
[2] Dengue, 1 case at Atlanta, Ga
[3] Rabies (human), 1 case, 1 death, at Dallas, Tex, and 1 death at Los Angeles, Calif.

The following table gives the rates per 100,000 population for 102 cities for the five-week period ended July 31, 1926, compared with those for a like period ended August 1, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many

of the cities not being available The 102 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926 The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, June 27 to July 31, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926
102 cities	[2] 90	[3] 122	93	[4] 102	76	[4] 94	75	[4] 90	[5] 75	[6] 81
New England	113	64	60	57	60	78	60	33	60	[7] 43
Middle Atlantic	95	163	126	120	96	101	90	109	92	103
East North Central	81	117	83	106	68	109	63	99	69	83
West North Central	127	[4] 125	91	[4] 93	83	[4] 107	103	[4] 95	97	[4] 85
South Atlantic	38	83	52	66	50	32	42	34	[5] 48	[8] 22
East South Central	5	[9] 22	21	5	11	21	11	10	11	[10] 17
West South Central	57	47	35	43	26	26	66	39	40	39
Mountain	176	155	102	118	120	109	111	64	148	91
Pacific	[2] 138	129	119	181	94	159	99	175	64	119

MEASLES CASE RATES

	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926
102 cities	[2] 220	[3] 435	186	[4] 303	153	[4] 215	101	[4] 155	[5] 70	[6] 103
New England	338	319	273	246	252	180	208	109	180	[7] 87
Middle Atlantic	257	313	248	211	198	129	127	108	77	63
East North Central	300	634	210	448	178	365	111	243	68	171
West North Central	30	[4] 604	34	[4] 417	28	[4] 191	18	[4] 183	30	[4] 93
South Atlantic	248	436	200	293	140	203	90	128	[5] 68	[8] 116
East South Central	89	[9] 430	110	285	74	171	58	125	26	[10] 100
West South Central	4	52	0	47	0	17	4	13	0	9
Mountain	37	437	55	264	28	191	37	173	102	127
Pacific	[2] 35	461	39	337	61	329	19	213	33	121

SCARLET FEVER CASE RATES

	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926
102 cities	[2] 93	[3] 170	87	[4] 127	58	[4] 93	55	[4] 83	[5] 54	[6] 73
New England	108	187	141	158	77	99	69	85	72	[7] 115
Middle Atlantic	79	188	81	129	45	73	42	75	37	52
East North Central	114	187	91	145	63	118	63	93	60	85
West North Central	164	[4] 270	139	[4] 205	105	[4] 185	115	[4] 127	121	[4] 143
South Atlantic	56	66	42	64	44	45	15	36	[5] 34	[8] 34
East South Central	68	[9] 66	116	52	74	52	26	93	58	[10] 67
West South Central	44	60	9	34	22	52	31	82	26	39
Mountain	102	91	148	55	83	91	157	64	83	36
Pacific	[2] 67	151	50	121	58	94	44	92	47	86

[1] The figures given in this table are rates per 100,000 population, annual basis—and not the number of cases reported Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Spokane, Wash , not included
[3] Sioux Falls, S Dak , and Covington, Ky , not included
[4] Sioux Falls, S Dak , not included
[5] Tampa, Fla , not included
[6] Hartford, Conn , Sioux Falls, S Dak , Norfolk, Va , and Mobile, Ala , not included
[7] Hartford, Conn , not included
[8] Norfolk, Va , not included
[9] Covington, Ky , not included
[10] Mobile, Ala , not included

*Summary of weekly reports from cities, June 27 to July 31, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925—*Continued

SMALLPOX CASE RATES

	Week ended— July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926
102 cities	[2] 14	[3] 11	16	[4] 7	14	[4] 7	10	[4] 6	[5] 9	[6] 5
New England	0	0	2	0	2	0	5	0	0	[7] 0
Middle Atlantic	1	2	0	0	1	1	0	0	0	1
East North Central	13	10	11	7	9	6	8	8	3	6
West North Central	16	[4] 26	20	[4] 28	16	[4] 26	12	[4] 14	14	[4] 4
South Atlantic	10	11	23	9	8	6	15	6	[5] 2	[8] 2
East South Central	58	[9] 39	74	0	42	5	37	10	21	[10] 6
West South Central	4	22	4	4	13	13	4	13	4	4
Mountain	28	75	18	9	18	9	0	27	55	9
Pacific	[2] 35	19	97	24	113	22	64	8	80	32

TYPHOID FEVER CASE RATES

	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926
102 cities	[2] 34	[3] 17	33	[4] 13	36	[4] 22	33	[4] 18	[5] 40	[6] 30
New England	22	12	24	9	31	12	22	9	22	[7] 15
Middle Atlantic	15	11	17	7	25	11	21	9	30	23
East North Central	10	5	13	5	11	5	8	6	10	10
West North Central	20	[4] 10	42	[4] 16	42	[4] 14	38	[4] 12	46	[4] 22
South Atlantic	65	36	56	43	52	58	50	47	[5] 64	[8] 58
East South Central	184	[9] 127	163	52	205	166	163	135	168	[10] 261
West South Central	233	13	159	30	128	56	163	30	154	47
Mountain	9	27	28	0	18	0	46	46	55	36
Pacific	[2] 21	22	17	13	30	22	28	8	44	11

INFLUENZA DEATH RATES

	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926
96 cities	4	[3] 6	2	[4] 4	2	[4] 4	2	[4] 3	[5] 1	[6] 2
New England	2	5	0	7	0	0	0	2	0	[7] 0
Middle Atlantic	2	7	2	1	2	4	3	2	1	1
East North Central	5	5	2	7	3	4	1	4	0	1
West North Central	0	[4] 8	0	[4] 0	0	[4] 0	4	[4] 2	0	[4] 0
South Atlantic	6	8	0	0	4	6	4	4	[5] 2	[8] 2
East South Central	11	[9] 0	16	16	0	21	5	5	0	[10] 6
West South Central	10	14	10	5	10	9	0	9	0	24
Mountain	0	9	0	0	0	9	9	9	[illegible]	[illegible]
Pacific	4	4	0	4	4	4	0	4	[illegible]	[illegible]

PNEUMONIA DEATH RATES

	July 4, 1925	July 3, 1926	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926
96 cities	56	[3] 75	59	[4] 67	54	[4] 60	48	[4] 54	[5] 59	[illegible]
New England	46	92	43	54	48	37	50	33	53	36
Middle Atlantic	61	90	64	73	62	74	51	64	65	41
East North Central	42	61	55	65	44	46	37	46	[illegible]	48
West North Central	40	[4] 38	38	[4] 53	53	[4] 36	40	[4] 40	40	[4] 57
South Atlantic	71	88	65	71	48	54	52	58	60	[8] 54
East South Central	89	[9] 121	84	119	68	109	58	99	68	[10] 67
West South Central	58	57	58	57	73	85	63	57	116	76
Mountain	65	46	74	36	83	36	55	64	74	55
Pacific	73	43	65	53	40	46	58	35	62	71

[2] Spokane, Wash , not included
[3] Sioux Falls, S Dak , and Covington, Ky , not included
[4] Sioux Falls, S Dak , not included
[5] Tampa, Fla , not included
[6] Hartford, Conn , Sioux Falls, S Dak , Norfolk, Va , and Mobile, Ala , not included.
[7] Hartford, Conn , not included
[8] Norfolk, Va , not included
[9] Covington, Ky , not included
[10] Mobile, Ala , not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	102	96	29,930,185	30,458,186	29,251,658	29,764,201
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	13	11	2,580,151	2,619,719	2,461,380	2,499,036
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

SMALLPOX ON VESSEL

Steamship "Karapara"—Development at quarantine, Durban, Union of South Africa[1]*—June 20-26, 1926.*—Later information dated July 9, 1926, received relative to the outbreak of smallpox on the steamship *Karapara*, at Durban, Union of South Africa, from oriental ports and Zanzibar, shows the development of two cases of smallpox in passengers landed from the vessel at Salisbury Island quarantine. The remaining passengers on the vessel were stated to be under strict surveillance.

THE FAR EAST

Report for week ended July 17, 1926.—The following report for the week ended July 17, 1926, was transmitted by the far eastern bureau of the health section of the League of Nations' secretariat, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt—Alexandria	0	0	0	0	9	3
British India						
Rangoon	----	1	----	7	1	0
Negapatam	----	0	----	2	0	0
Karachi	----	1	----	0	0	0
Ceylon—Colombo	1	1	0	0	0	0
Straits Settlements—Singapore	0	0	1	0	1	0
Dutch East Indies—Cheribon [1]	0	0	0	0	0	0
Siam—Bangkok	0	0	20	7	9	7

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
French Indo-China						
Saigon and Cholon	0	0	3	0	0	0
Haiphong	0	0	3	2	0	0
China						
Amoy	7	----	0	0	0	0
Shanghai	0	0	37	8	----	1
Japan—Yokohama [2]	2	1	0	0	0	0
Mauritius—Port Louis	1	0	0	0	0	0
Union of South Africa—Durban	0	0	0	0	1	0

[1] One infected rat has been found in the port during the week.
[2] One infected rat has been found outside the port area.

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Iraq—Basra.
British India—Madras, Chittagong, Tuticorin.
Federated Malay States.—Port Swettenham.

[1] Public Health Reports, Aug 13, 1926, p 1747

Straits Settlements—Penang
Dutch East Indies—Batavia, Surabaya, Samarang, Belawan Deli, Palembang, Sabang, Makassar, Menado, Banjermasin, Balik-Papan, Tarakan, Padang
Sarawak—Kuching
British North Borneo—Sandakan, Jesselton, Kudat, Tawao
Portuguese Timor—Dilly
Philippine Islands—Manila, Iloilo, Jolo, Cebu, Zamboanga
French Indo-China—Turane
Formosa—Keelung
China.—Hongkong
Kwantung—Port Arthur, Dairen.
Japan.—Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga Hakodate, Simonoseki
Korea—Chemulpo, Fusan
Manchuria—Antung, Mukden, Changchun, Harbin.
Union of Socialist Soviet Republics—Vladivostok

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.
New Guinea—Port Moresby
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia.—Noumea.
Fiji—Suva
Hawaii—Honolulu.

AFRICA

Egypt—Port Said, Suez.
Anglo-Egyptian Sudan.—Port Sudan, Suakin.
Eritrea.—Massaua
French Somaliland—Jibuti
British Somaliland—Berbera.
Italian Somaliland—Mogadiscio.
Kenya—Mombasa
Zanzibar—Zanzibar
Tanganyika.—Dar-es-Salaam.
Seychelles—Victoria
Portuguese East Africa—Mozambique, Beira, Lourenço Marques
Union of South Africa—East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from:

British India.—Calcutta, Bombay, Vizagapatan, Cochin.
Dutch East Indies—Pontianak
Madagascar—Tamatave, Majunga.

CANADA

Communicable diseases—Two weeks ended July 31, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in six Provinces of Canada for week ended July 24, and in seven Provinces for week ended July 31, 1926, as follows:

WEEK ENDED JULY 24, 1926

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta [1]	Total
Cerebrospinal fever			1		2			3
Influenza	10							10
Lethargic encephalitis				1				1
Smallpox				9	1	1		11
Typhoid fever	2		5	8	2	3		20

WEEK ENDED JULY 31, 1926

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta [1]	Total
Cerebrospinal fever			1					1
Influenza	10							10
Smallpox				8		4		12
Typhoid fever			12	18	8		1	39

[1] No report for week ended July 24, 1926

CUBA

Governmental food inspection and drug control.—According to information dated July 9, 1926, the Department of Sanitation is making plans for the nationalization of food inspection throughout Cuba and the punishment of dealers who violate the pure food regulations, special attention to be given to slaughter-houses and butcher shops. It was stated that Señor Lopez del Valle, Chief of Sanitation of Habana, was to study the pure food law of the United States, with a view to the adoption of a similar law for Cuba

The Secretary of Sanitation is also reported to sponsor a measure designed to put the importation of opium and all other drugs directly under governmental supervision.

ECUADOR

Guayaquil—Plague-infected rats—July 1–15, 1926.—During the two weeks ended July 15, 1926, 10,020 rats were reported taken at Guayaquil, Ecuador, of which number 8 rats were found plague infected.

EGYPT

Plague—July 2–8, 1926—Comparative—During the week ended July 8, 1926, 8 cases of plague, of which one case occurred in the city of Alexandria, were reported in Egypt, making a total of 100 cases reported since January 1, 1926, as compared with 81 cases reported during the corresponding period of the preceding year.

MEXICO

Smallpox—Malaria—Diarrhea and enteritis—Chihuahua.—A report dated July 8, 1926, states that in April and May several cases of smallpox were reported at San Antonio de Arenales, principally among Mennonite colonists. In January, a disease diagnosed as malaria was reported among the colonists at San Antonio de Arenales and Santa Clara. Malaria is said to be rare in these localities, which are at an altitude of about 5,000 feet. Among the population are colonists from both the United States and the Ukraine. In June many deaths of children from diarrhea and enteritis occurred in Chihuahua.

PANAMA CANAL

Communicable diseases—June, 1926.—During the month of June, 1926, communicable diseases were reported in the Canal Zone, and at Colon and Panama, as follows:

Disease	Canal Zone		Colon		Panama		Infected in other localities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chicken pox	2				5				7	
Diphtheria	1		1		6				8	
Dysentery	1				6		2		9	
Hookworm			4		45		49		98	
Malaria	205		13		11		56	3	285	3
Measles	2				4				6	
Meningitis			1						1	
Mumps	6		1						7	
Pneumonia [1]		1		3		15		3		22
Tuberculosis [1]		2		6		10		3		21
Whooping cough	1		1		4		1		7	

[1] Only deaths reported

PERU

Plague—June, 1926.—During the month of June, 1926, 34 cases of plague with 6 deaths were reported in Peru. The occurrence was in the departments of Cajamarca, Lima, and Piura. The greatest number of cases was reported in the coastal department of Piura and the district of Huancabamba, viz, 13.

UNION OF SOUTH AFRICA

Plague—June 20–26, 1926.—During the week ended June 26, 1926, six cases of plague with two deaths were reported in the Union of South Africa, occurring in the Cape Province. Of these, four cases with one death, in the colored population, and one fatal case in a European, were reported in the Calvinia district, and one case, colored, in Williston district. The occurrence was on farms.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended August 20, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
India				
Calcutta	June 20-26	27	28	
Do	June 27-July 3	48	46	
Rangoon	June 13-26	37	21	
Do	June 27-July 3	9	6	
Philippine Islands				
Manila	do	1		
Province—				
Mindoro	Feb 28-Mar. 6	2	2	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Ecuador				
Guayaquil				July 1-15, 1926 Rats taken, 10,020, plague-infected rats found—8
Egypt				July 2-8, 1926 Cases, 8, total, Jan. 1-July 8, 1926 100, corresponding period, 1925—cases, 81
India				
Madras Presidency	June 6-19	37	14	
Rangoon	June 13-26	10	8	
Do	June 27-July 3	2	3	
Java.				
Batavia	June 26-July 2	12	11	Province
East Java and Madoera	June 13-19	1	1	
Peru				June, 1926 Cases, 34, deaths, 6
Department—				
Cajamarca	June 1-30	10	4	In two localities
Lima	do	11	2	In 5 localities, including Lima, one case
Piura	do	13		In Huancabamba district
Union of South Africa				
Cape Province—				
Calvinia district	June 20-26	5	2	On four farms, colored population, cases, 4, deaths, 1 European, cases, 1, deaths, 1
Williston district	do	1		On farm

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	July 1-10	1		
Brazil				
Bahia	June 20-26	1		
Do	June 27-July 3	1		
Para	June 20-26	6	4	
Do	June 27-July 17	10	6	
British South Africa				
Northern Rhodesia	June 8-14	5		
Canada.				
Manitoba				July 18-24, 1925 Cases, 1
Ontario				July 18-31, 1926 Cases, 17.
Fort William	July 25-Aug. 7	2		
Kingston	July 11-17	2		
North Bay	July 25-31	2		
Saskatchewan	July 18-31	5		
China				
Antung	July 4-10	1		
Chungking	June 27-July 3			Present
Foochow	do			Do
Hongkong	June 20-26	3	1	
Manchuria—				
Railway Stations	July 4-10	6		
Shanghai	June 27-July 10	1	1	Case foreign
Swatow	June 27-July 3			Present, sporadic

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended August 20, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Egypt				
Alexandria	June 25–July 1	4		
France				
St. Etienne	Apr. 18–June 2	5	3	
Great Britain				
England and Wales	July 18–24	91		
India				
Bombay	June 27–July 3	12	8	
Calcutta	June 13–26	24	18	
Do	June 27–July 3	5	5	
Karachi	June 27–July 10	6	4	
Madras	do	2		
Rangoon	June 20–26	2	2	
Iraq				
Baghdad	do	2	2	
Japan				
Nagoya	July 4–10	1		
Tokyo	June 28–July 3	2		
Java				
Batavia	June 19–25	1		Province.
East Java and Madoera	June 6–19	24		
Mexico				
San Luis Potosi	July 25–31		2	
Torreon	July 1–31		5	
Switzerland				
Lucerne Canton	June 1–30	1		
Union of South Africa				
Cape Province	June 20–26			Outbreaks
Orange Free State	do			Do
From vessel				
S. S. Karapara		2		June 20–26, 1926. At Durban, Union of South Africa—Cases among passengers removed to quarantine. Vessel from oriental ports via Zanzibar. Case removed from vessel on arrival Durban.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Argentina				
Rosario	Feb. 1–28	2		
Egypt				
Cairo	Feb. 12–18	6	4	
Mexico				
Durango	July 1–31		1	
Palestine				
Gaza	July 6–12	1		
Poland	May 23–29	161	9	
Union of South Africa				
Transvaal—				
Wakkerstroom district	June 20–26			Outbreaks
Wolmaransstad district	do			Do

Reports Received from June 26 to August 13, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr. 18–May 1, 1926. Cases, 30, deaths, 21
China				
Shanghai	Reported July 20	35	8	
French Settlements in India				Mar. 7–May 8, 1926. Cases 18, deaths, 18

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 13, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
India				Apr 25–June 5, 1926: Cases 13,990, deaths, 8,580.
Bombay	May 30–June 5	1	1	
Calcutta	Apr 4–May 29	478	418	
Do	June 13–19	46	41	
Madras	May 16–June 5	2	1	
Rangoon	May 9–June 12	30	23	
Indo-China				
Saigon	May 2–15	52	48	
Do	May 22–June 12	28	28	
Philippine Islands:				
Manila	May 18–24	2	2	
Provinces—				
Albay	Apr 18–24	1	1	
Mindoro	Feb 21–27	1	1	
Romblon	Dec 14–31	42	43	
Do	Jan 2–23	16	12	
Siam				
Bangkok	May 2–June 12	1,325	736	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	June 21–30	1		Under date of July 16, 2 cases reported.
Azores				
St Michaels—				
Arrifes	May 9–June 26	2		
Livramento	May 15–29	2	1	
British East Africa:				
Kisumu	May 16–22	1	1	
Uganda	Mar 1–31	35	34	
Ceylon				
Colombo	May 29–June 5	1	1	
Chile				
Iquique	June 20–26		1	
China:				
Amoy	Apr 18–June 26	40	30	
Do	June 27–July 3	8		
Foochow	June 6–12			Several cases Not epidemic
Nanking	May 9–July 3			Prevalent
Ecuador				
Guayaquil	May 16–June 30	6		Rats taken, 30,914, found infected, 31
Egypt				Jan 1–July 1, 1926 Cases, 92.
City—				
Suez	May 21–July 1	5	3	
Provinces—				
Beni-Suef	May 28–June 8	8	2	
Gharbieh	June 2	1	1	
Greece				
Athens	Apr. 1–30	7	2	Including Piræus.
Do	May 1–31	9	2	Do
Patras	May 27–June 12	4	1	
Zante	May 17	1		
India				Apr 25–May 29, 1926. Cases, 49,639, deaths, 38,833.
Bombay	May 2–June 26	16	15	
Karachi	May 23–June 26	15	13	
Madras Presidency	Apr. 25–June 5	96	66	
Rangoon	May 9–June 12	10	7	
Indo-China				
Saigon	May 23–June 5	3	1	
Iraq				
Baghdad	Apr. 18–June 12	161	108	
Japan				
Yokohama	July 2–3	3	3	
Java.				
Batavia	Apr. 24–June 19	65	65	
Cheribon	Apr 11–24	3	3	
Madagascar				Apr 1–15, 1926 Cases, 42, deaths, 39 May 1–20, 1926 Cases, 20, deaths, 20
Ambositra Province	May 1–15	4	4	Septicemic
Morondava Province	Apr. 1–15	2	2	Do.
Tananarive Province				Apr 1–May 31, 1926 Cases, 96; deaths, 93
Tamatave (Port)	May 16–31	1	1	
Tananarive Town	Apr 1–May 15	6	6	
Other localities	do	80	77	Bubonic, pneumonic, septicemic,

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 13, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Nigeria				Feb 1-Mar 31, 1926 Cases, 81; deaths, 62
Peru				May, 1926 Cases, 23, deaths, 10.
Departments—				
Ancash	May 1-31			Present
Cajamarca	do			Do.
Ica	do	1		
Libertad	do	4		Pacasmayo, cases, 2; Trujillo district, cases, 2
Lima	do	18	10	Lima City, 1 case, country estates, 1
Russia				Jan 1-Feb 28, 1926 Cases, 32
Senegal				Nov 1-30, 1926 Cases, 3, deaths, 2 Mar 1-Apr. 30, 1926 Cases, 15, deaths, 4
Siam				
Bangkok	May 23-29	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Tunisia	May 11-31	70		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan.
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-19	2	2	
Williston District	do	1		
Orange Free State—				
Hoopstad District—				
Protestpan	May 9-22	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	14		
Bolivia				
La Paz	May 1-June 30	14	7	
Brazil				
Manaos	Apr 1-30		5	
Para	May 16-June 19	20	21	
Rio de Janeiro	May 2-June 19	132	91	
Santos	Mar 1-7		1	
British East Africa				
Tanganyika	May 2-22		12	
Uganda	Mar 1-31	1		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Canada				May 30-June 12, 1926 Cases, 46.
Alberta	May 30-June 12	3		
Do	June 27-July 1	71		
Manitoba	May 30-June 26	24		
Do	June 27-July 17	6		
Winnipeg	June 6-12	5	1	
Do	July 4-17	6		
Ontario				May 30-June 26, 1926 Cases, 36 June 27-July 17, 1926 Cases, 24
Kingston	May 23-June 26	5		
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Orillia	Apr. 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
Saskatchewan				May 30-June 19, 1926 Cases, 16. June 27-July 17, 1926 Cases, 13.
Regina	July 4-10	2		
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Chungking	May 2-June 26			Present
Foochow	May 9-June 26			Do
Hongkong	May 2-June 12	16	9	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 13, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Manchuria—				
An-shan	May 16-June 12	5		South Manchuria Railway
Antung	May 16-June 19	5		Do
Changchun	May 16-June 26	6		Do
Do	June 27-July 3	1		Do
Dairen	Apr 26-June 20	69	16	
Fushun	May 16-June 5	4		Do
Harbin	May 14-June 30	21		Do
Kai-yuan	May 16-June 30	10		Do
Kungchuling	June 13-19	1		Do
Liao-yang	May 16-June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do.
Ssupingkai	May 16-June 30	2		Do
Teshihchiao	do	2		Do
Wa-feng-tien	do	3		Do
Nanking	May 8-July 3			Present.
Shanghai	May 2-June 26	10	25	Cases Foreign Deaths, population of international concession, foreign and native
Swatow	May 9-June 26			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshein	May 1			Prevalent
Chosen				Mar 1-31, 1926 Cases, 200, deaths, 42.
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-June 24	14	3	
Cairo	Jan 29-Feb 4	1	1	
Esthonia				May 1-31, 1926 Cases, 1
France				Mar 1-Apr 30, 1926 Cases, 92.
St Etienne	June 9-15	2		
French Settlements in India	Mar 7-May 8	178	178	
Great Britain				
England and Wales				May 23-July 3, 1926 Cases, 1,068 July 4-17, 1926. Cases, 285
Bradford	May 23-29	1		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-17	1		
Nottingham	May 2-June 5	7		
Sheffield	June 13-19	1		
Do	July 4-10	1		
Greece				
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr 25-June 5, 1926. Cases, 41,055, deaths, 10,793.
Bombay	May 2-29	114	63	
Do	June 13-26	42	35	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-19	8	7	
Karachi	May 16-June 26	44	18	
Madras	do	7	4	
Rangoon	May 9-June 12	8	3	
Indo-China				
Saigon	May 9-15	1		
Iraq				
Baghdad	May 9-June 19	6	1	
Basra	Apr 18-June 28	34	25	
Italy				Mar. 28-May 15, 1926 Cases, 18.
Jamaica				May 30-June 26, 1926. Cases, 99 (Reported as alastrim)
Japan				Apr 11-May 1, 1926 Cases, 9.
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-21	1		Province.
East Java and Madoera	Apr 11-June 5	63	5	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Latvia				Apr 1-30, 1926 Cases, 3

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 13, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Mexico				Feb 1-Mar 31, 1926 Deaths, 602
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-July 19		3	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present. 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-17		5	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Nigeria				Feb 1-Mar. 31, 1926 Cases, 270, deaths, 12
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May, 1926: Cases, 12; deaths, 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Oporto	May 23-June 5	4		
Do	July 11-17	1		
Russia				Jan 1-Feb 28, 1926 Cases, 1,403.
Siam				
Bangkok	May 2-June 12	23	20	
Straits Settlements				
Singapore	Apr 25-May 1	1		
Tunisia				Apr 1-May 31, 1926 Cases, 12.
Union of South Africa				
Cape Province—				
Idutywa District	May 23-29			Outbreaks.
Natal	May 30-June 5			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg Districts
Johannesburg	May 9-June 12	5		
Yugoslavia				Apr 15-30, 1926 Cases, 2, deaths 1
On vessel				Three cases, 1 death, at Aden Arabia, stated to have been imported by sea
S. S. Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed At Durban, Union of South Africa, June 16, 1926. One suspect case landed.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Bolivia				
La Paz	June 1-30		1	
Bulgaria				Apr 1-30, 1926 Cases, 27; deaths, 2
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Valparaiso	Apr 29-May 5		1	
China				
Antung	June 14-27	7	1	
Do	June 28-July 4	4		
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshein				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen	Feb 1-28	228	18	Feb 1-Mar 31, 1926 Cases, 456, deaths, 47
Chemulpo	May 1-31	28	1	
Czechoslovakia				Apr 1-30, 1926 Cases, 37, deaths, 4
Egypt				
Port Said	June 1-24	4	1	
Cairo	Jan 29-Feb. 4	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 13, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Great Britain				
Scotland—				
Glasgow		7		Reported Aug. 3, 1926.
Ireland (Irish Free State):				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerry County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-May 8, 1926. Cases, 3.
Japan				Mar 28-May 1, 1926 Cases, 24.
Lithuania				Mar 1-Apr 30, 1926 Cases, 106, deaths, 13
Mexico				Feb 1-Mar 31, 1926: Deaths, 73.
Mexico City	May 16-June 5	20		Including municipalities in Federal District
Do	June 13-19	9		Do.
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar. 1-Apr 30, 1926 Cases, 299
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces
Jaffa District	June 15-28	5		
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar. 28-May 22, 1926 Cases, 901, deaths, 67
Rumania				Mar 1-31, 1926 Cases, 41
Russia				Jan 1-Feb 28, 1926 Cases, 9,870.
Tunisia				Apr. 1-May 31, 1926 Cases, 94.
Tunis	June 21-30	1		
Turkey				
Constantinople	June 16-22	1		
Union of South Africa				Apr. 1-May 31, 1926 Cases, 153; deaths, 19
Cape Province				Apr 1-May 31, 1926 Cases, 116, deaths, 15 Native
Do	May 31-June 12			Outbreaks
Grahamstown	do	1		Sporadic.
Natal				Apr 1-30, 1926; Cases, 4 Native.
Orange Free State				Apr 1-May 31, 1926 Cases, 15, deaths, 1
Do	June 6-12			Outbreaks
Transvaal				Apr 1-30, 1926 Cases, 3, deaths, 3 Native
Yugoslavia				Apr 15-June 30, 1926 Cases, 48, deaths, 7
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-29	4	3	
Do	June 6-19	4	3	

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Characteristics of Blood Virus in Rocky Mountain Spotted Fever

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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen B J LLOYD, *Chief of Division*

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PUBLIC HEALTH REPORTS

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ROCKY MOUNTAIN SPOTTED FEVER: CERTAIN CHARACTERISTICS OF BLOOD VIRUS

By R R SPENCER, Surgeon, and R R PARKER, Special Expert, United States Public Health Service

The experiments outlined below suggest that some of the virus in the blood of animals infected with Rocky Mountain spotted fever is inseparable from the red and white blood cells, that it has a strong affinity for the same cells of normal animals, that it can be easily separated from the platelets, and that it exists in a form not readily demonstrated by our present methods of staining In this connection it is interesting to note that Kusama (quoted by Segal) and Segal (1) reported that the virus of typhus fever was not associated with leucocytes or erythrocytes, but with the platelets.

The apparent disparity between the number of demonstrable organisms in the blood of animals infected with Rocky Mountain spotted fever, and the high degree of infectiousness of the same blood has often been noted.

Ricketts (2), for example, saw in the blood serum of infected man, monkeys, and guinea pigs an occasional "diplococcuslike body with an eosin-staining intermediate substance" These bodies could be "found in any preparation of infected blood during a search of not more than a half hour's duration." Ricketts has also shown that 0.7 c c. of red cells after the tenth washing was infectious, while 10 c. c. of the supernatant fluid after the tenth washing was not infectious. White cells after the third washing were infectious in 5 c. c. amounts. Smaller amounts of cell suspensions were not injected and the amount of the dilution after each washing was not given.

Wolbach (3) states that "the demonstration of the parasite in the circulating blood is extremely difficult."

Connor (4) by diluting spotted-fever serum five times with salt solution and centrifuging (2,000 revolutions per minute) for six hours was able to demonstrate in smears of the residue a few organisms identical with forms in tick and animal tissue described by Wolbach (3) and Nicholson (5). Connor says: "The unusual virulence of the blood (0.001 c c. often being infectious) seems somewhat incompatible with the exceedingly small number of organisms found."

EXPERIMENTS

Experiment No. 1: Effect of high-speed centrifugation on virus in cell-free serum.—The blood serum of two spotted-fever-infected guinea pigs was pooled and a sample removed to determine the minimal

infectious dose by injecting graded dilutions into guinea pigs (two animals to each dilution).

The remaining pooled serum was then centrifuged at 8,800 revolutions per minute for 15 minutes in a Leune centrifuge One cubic centimeter of the top was carefully removed and used for graded injections into animals as before. All of the remaining fluid, except 1 c. c. at the bottom, which contained a small amount of sediment, was discarded. This residue was similarly injected into animals in graded dilutions.

Result—The serum before centrifugation produced spotted fever in both animals receiving 1/500 c. c. but not in those receiving less amounts.

The top serum of the centrifuged portion produced spotted fever in guinea pigs receiving 1/10 c. c. but not in less amounts.

Injection of the lower centrifuged portion produced spotted fever in one of the guinea pigs receiving 1/100 c. c. but not in the other nor in those receiving less amounts.

Centrifugation for a longer period than 15 minutes was inadvisable because of the great amount of heat produced by the high-speed machine The heat was probably responsible for the decrease in infectivity of the centrifuged sediment.

In smears made from the top serum and stained with Giemsa's solution no organisms could be found A few scattered rickettsia-like forms could be found in smears of the lower portion.

Experiment No 2: Association of the virus with washed red cells.—The red cells of 12 c. c. of blood of a spotted-fever-infected guinea pig were washed three times with salt solution. The lower half only of the packed cells was then drawn off with a fine capillary pipette, care being taken not to draw up the thin top coat containing leucocytes and platelets. The pure red cells were then diluted to the original blood concentration, and 1 c. c. was used for graded dilutions and injected into guinea pigs. The remaining red cells were washed by centrifugation nine times more. Only three minutes were required for complete throwing down of the red cells at a speed of 1,200 revolutions per minute, and the clear supernatant salt solution was drawn off each time so that the packed red cells were left in a volume of less than 5 c. c. Salt solution sufficient to make a total volume of 40 c. c. was added after each washing, and the cells were thoroughly mixed. This method of washing was followed in all subsequent tests.

Result.—After the third washing the injection of 1/10 c. c. of red cells (diluted to the original volume) produced typical spotted fever in each of two guinea pigs and a moderate fever developed in one of two animals receiving 1/100 c. c. of cells. Smaller amounts failed to give fever.

Two guinea pigs receiving 4 c c. each of the supernatant salt solution of the twelfth washing were negative for 12 days and subsequently were found susceptible by reinoculation of blood virus.

Guinea pigs receiving 1 c c each of red cells (diluted to the original volume of the blood) after the twelfth washing and one of the pigs receiving 1/10 c c developed typical spotted fever. Less amounts failed to give fever We have found it impossible to demonstrate organisms of any kind within the red cells either in fresh preparations or in smear preparations stained with Giemsa's solution.

Experiment No. 3· Association of the virus with washed white blood cells.—A white-cells exudate obtained by injecting aleuronat into the peritoneal cavity of an infected guinea pig was suspended in 10 c. c. of salt solution and washed 12 times in the same manner as in the case of the red-blood cells The supernatant fluid after each centrifugation could be poured off, leaving a volume of less than 1 c. c of white cells The washing of these cells was therefore more thorough than that of the red cells.

Result—Guinea pigs receiving 1/100 c c of unwashed cells developed spotted fever. Less amounts failed

Guinea pigs receiving 1 c. c and one animal receiving 1/10 c. c. of the white cells after the twelfth washing, developed spotted fever. Less amounts were unsuccessful.

Experiment No 4: Adsorption of virus with normal red cells.—Five cubic centimeters of a cell-free serum obtained from an infected guinea pig was mixed with an equal volume of a suspension of washed normal red-blood cells After thorough agitation the mixture was permitted to stand one-half hour at room temperature. The red cells were then washed 10 times as in previous tests and injected as before in graded amounts.

Result—The two guinea pigs receiving 1 c. c and the two receiving 1/10 c c. of the washed cells developed spotted fever.

Experiment No 5· Adsorption of virus with normal white blood cells—Five cubic centimeters of cell-free guinea-pig serum virus was mixed with equal amounts of a suspension of normal guinea-pig leucocytes (½ gram of moist leucocytes in 5 c. c. of salt solution). The mixture was thoroughly shaken and permitted to stand one-half hour at room temperature and then washed 10 times by centrifugation. The washed cells were then diluted to the original volume of 5 c c. and injected into guinea pigs.

Result—Both animals receiving 1/10 c c. as well as the two receiving 1 c. c. of the washed cells developed spotted fever.

Experiment No. 6: Association of virus with platelets—(*a*) A 5 c. c. suspension of platelets obtained from 10 c. c. of blood of a spotted-fever-infected guinea pig was secured by the method of Kusama as reported by Segal (1). The unwashed suspension from the infected

animal produced spotted fever in 1/100 c c amounts when injected into guinea pigs After the third washing 1 c. c. amounts of the platelet suspension failed to produce spotted fever in each of two animals. Larger quantities were not used because so small an amount of the suspension was available.

(*b*) Three cubic centimeters of serum from an infected guinea pig were then added to 3 c c. of a platelet suspension obtained from 10 c c of blood of a normal guinea pig. One-tenth cubic centimeter of the unwashed mixture produced spotted fever, while 1 c. c. of platelets after the sixth washing failed to give fever when injected into each of two animals.

Experiment No. 7: Absorption of virus with fuller's earth.—Four cubic centimeters of serum virus was added to 4 c. c. of a sterile suspension of fuller's earth (½ gram of powdered fuller's earth in 40 c. c. of salt solution).

The mixture stood one-half hour at room temperature. Three cubic centimeters was set aside and the remaining 5 c. c. was washed 10 times by centrifugation as in previous tests upon cells. The washed and unwashed suspensions were injected into guinea pigs at the same time.

Results.—One-tenth cubic centimeter of the unwashed suspension produced spotted fever, while 1 c. c. of the washed suspension injected into each of four guinea pigs failed to give spotted fever.

The test was duplicated with the exception that finely ground charcoal was substituted for fuller's earth. The washed suspension likewise gave negative results.

DISCUSSION

In our tests we never were able to obtain an absolutely pure suspension of white cells or platelets. A few red cells could always be found when stained smears were prepared from such suspensions.

It was somewhat surprising to find that the virus was not retained by the platelets, especially since Kusama and Segal have shown that the virus of typhus fever is associated with the platelets but not with the red or white cells.

Inasmuch as the virus in the serum of animals infected with Rocky Mountain spotted fever can be thrown down only partially by high-speed centrifugation, one can not hold the view that the retention of the virus by both red and white cells (normal and infected) after slow centrifugation is due to the possession of the same specific gravity by the cells and virus. It is unlikely that the specific gravity of the virus would be such that it stratifies at the same level of both red and white cells. Furthermore, when mixed with a suspension of fuller's earth or charcoal and subjected to the same washing procedure it is not thrown down along with these particles. The test

strongly suggests, therefore, that part of the virus remains lodged within or adherent to the cells.

In a cytological study of rickettsia in tissues of guinea pigs infected with Rocky Mountain spotted fever, Nicholson (5) says: "In some tissues it required several hours' search with the aid of a mechanical stage and in others a day or more to find them * * *. In several cases also, they appeared to be present within erythrocytes." As illustration, he gives a single figure which bears the title, "One rickettsia apparently within an erythrocyte."

Fricks (6) has described, in the centrifuged red blood cells of infected animals, "round or slightly elongated red chromatin bodies partially surrounded by or in close approximation to a somewhat larger deep-blue staining body." Such bodies were never found in control specimens Fricks suggested that these bodies were of protozoan nature but hesitated to draw definite conclusions from his findings.

We are inclined to regard as highly significant the fact that, in the examination of hundreds of specimens of infected blood, rickettsia could not be demonstrated by us within erythrocytes, and yet the infective agent could not be washed or diluted away from such cells.

The difficulty with which rickettsia are demonstrated microscopically in tissues of infected animals is not compatible with the general, intense plasmatic and systemic infection as shown by animal inoculation, although we realize the possibility that a single organism or very few organisms may be infective. It seems likely, however, that the few rickettsia (*Dermacentroxenus rickettsi* Wolbach) found, represent, in part, one phase of the infective agent, but they do not convincingly represent all known manifestations of the blood virus. In this connection it may be stated that one receives the same impression when a study is made of the presence and distribution of rickettsia in the tissues of infected ticks (7).

Our tests might be regarded as suggesting that the virus of Rocky Mountain spotted fever can assume in the mammalian host a noncellular or nonparticulate phase which can not be demonstrated by our present known methods.

SUMMARY

1. The serum from guinea pigs infected with Rocky Mountain spotted fever and subjected to high speed (8,800 revolutions per minute) centrifugation retains infectivity in the top portion.

2 After repeated washings by slow speed (1,200 revolutions per minute) centrifugation, red and white blood cells from infected guinea pigs are capable of transmitting the infection although the demonstration of organisms in fresh preparations or stained smears of such cells is extremely rare.

3. Normal red and white blood cells to which serum virus has been added retain the infection after repeated washings by centrifugation.

4. A suspension of platelets from an infected guinea pig, as well as a suspension from a normal animal to which virus has been added, does not retain the infection after washing by centrifugation.

5. Suspensions of fullers' earth or charcoal to which serum virus has been added, quickly lose infectiousness when washed by centrifugation.

6. The suggestion is made that the virus of Rocky Mountain spotted fever may assume a form incapable of demonstration by known methods.

REFERENCES

(1) Segal, J (1922) British Jour Exp Path, vol. 3, p. 95.

(2) Ricketts, H T. Contributions to Medical Science University of Chicago Press, 1911.

(3) Wolbach, S. B.: Jour Med. Res., Nov. 1919, vol. 41, No. 1.

(4) Connor, C. L.: Jour. Infect. Dis., Dec. 1924, vol 35, No. 6.

(5) Nicholson, F. M : Jour. Exp. Med., 1923, vol. 37, p. 221.

(6) Fricks, L. D : Pub. Health Rep., Mar. 3, 1916, vol. 31, No. 9, p. 516. Reprint No. 327.

(7) Parker and Spencer: Pub. Health Rep, Mar. 12, 1926, vol. 41, No 11, p 461. Reprint No. 1067.

ERRONEOUS REPORT OF YELLOW FEVER IN NEW YORK CITY

An erroneous report of a death from yellow fever in New York City was made recently, due to an error in diagnosis. The cause of death appeared as yellow fever on the death certificate, and in this manner appeared in the weekly list of communicable diseases reported by the city department of health to the customhouse, where an employee of the Public Health Service inadvertently entered it on the port sanitary statement without bringing the matter to the attention of the medical officers. The port sanitary statements issued by the Public Health Service are used by the consuls of various countries in preparing bills of health. The yellow fever item appearing on bills of health quite naturally soon stimulated inquiries, especially in view of the fact that no official declaration of the case had been made by officials of the Public Health Service. In response to these inquiries, the Surgeon General promptly cabled the information that the report was erroneous and was due to an error in diagnosis.

The facts of the case are, briefly, as follows:

On July 3, 1926, a case was diagnosed as yellow fever from autopsy findings by a pathologist of a New York City hospital. Officers of the Public Health Service and officials of the New York City health department immediately investigated the case and found no justification for such a diagnosis. Unfortunately, however, the cause of death appeared as yellow fever on the death certificate, and in this way was included in the weekly reports made by the city health department to the customhouse, coming to the attention of the Public Health Service employee who makes out the port sanitary statements.

The patient was taken from a steamship belonging to a fruit company. The vessel had been last previously boarded and inspected at the New York quarantine station on May 25, 1926. On June 1 the vessel had sailed for Kingston, Jamaica, and since that date had sailed only between Kingston and Philadelphia It entered New York coastwise from Philadelphia on July 1 The patient had left Jamaica on the vessel on June 22 He died July 3, 1926.

Officials of the International Health Board state that there has been no case or suspected case of yellow fever in Jamaica for a great many years.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Public-health aspects of cross connections and dual water supplies. Matthias Nicholl, Charles A Holmquist, and Arthur S. Bedell. *American Journal of Public Health,* vol 16, No 4, April, 1926, pp. 355–364. (Abstract by C. M. Baker)

The authors tabulate some 41 outbreaks of typhoid fever caused by pollution of water supplies through faulty cross connections involving over 100 deaths since 1903

Report of the committee on private fire-protection service of the American Water Works Association in June, 1919; report of the committee on cross connections, by-passes, and emergency intakes on public water supplies, conference of State sanitary engineers, Boston, Mass , June, 1921, report of the action of the board of water commissioners, Hartford, Conn., 1920, and resolutions passed by the fire-protection section of the American Water Works Association at Louisville, Ky., April 30, 1925, are reviewed

In discussing double check-valves, information is given that an inspection in a city in New York State disclosed the fact that of 22 double check-valves, 6 sets were leaking in both valves, 15 in one

valve, and only 1 showed no leak. In another city 27 per cent of the installations were affording no protection, and only 1 out of 22 installations was tight in both valves.

Appended to the article is a bibliography of 58 references.

Studies on lactose fermenting bacteria. Fred Berry, chief, division of laboratories, Ohio State Department of Health, Columbus, Ohio. *American Journal of Public Health*, vol 16, No. 6, June, 1926, pp. 590–594. (Abstract by H A. Kroeze)

These studies were made to determine the nature of slow gas-forming organisms which are not infrequently found in the examination of public water supplies The studies were made on ground water supples, including almost every type of dug, driven, or drilled wells, and a few springs Samples (64) were collected in several series extending over a period from June to January. No seasonal difference was noted in the prevalence of slow lactose fermenters.

The writer gives a table showing the comparison of the rate of lactose fermentation, methyl red and Voges-Proskauer reactions, and growth in Koser's citrate medium, with comments on the results. A classification as to the source of the samples is also given

The writer concludes that "The results obtained in 640 samples of ground water confirm the opinion expressed by the committee on standard methods of water analysis that bacteria which do not produce 10 per cent or more gas in 48 hours at 37° C in 1 per cent lactose broth are of slight sanitary significance."

STATE AND INSULAR HEALTH AUTHORITIES, 1926

DIRECTORY, WITH DATA AS TO APPROPRIATIONS AND PUBLICATIONS

Directories of the State and insular health authorities of the United States for each year from 1912 to 1925 have been published in the Public Health Reports [1] for the information of health officers and others interested in public-health activities These directories have been compiled from information furnished by the respective State and insular health officers, and include data as to appropriations and publications.

Where an officer has been reported to be a "whole-time" health officer, that fact is indicated by an asterisk (*). For this purpose a "whole-time" health officer is defined as "one who does not engage in the practice of medicine or any other business, but devotes all his time to official duties."

[1] Reprints Nos. 83, 123, 190, 268, 344, 405, 488, 544, 605, 706, 775, 871, 949, and 1043, from the Public Health Reports.

ALABAMA

Board of censors of the State medical association, acting as a committee of public health
W W Brandon, governor, ex officio chairman, Montgomery
S W Welch, M D , Montgomery
W D Partlow, M D , Tuscaloosa
J N Baker, M D , Montgomery
W S Britt, M D , Eufaula
D T McCall, M. D , Mobile
W W Harper, M D , Selma
A N Steele, M D , Anniston.
W H Wilder, M D , Birmingham
B. L Wyman, M D , Birmingham.
R S Hill, M D., Montgomery
Executive health officer
*S W Welch, M D , State health officer, Montgomery
Registrar of vital statistics
*W T Fales, Montgomery
*Ethel Hawley, chief clerk, Montgomery
Laboratories of the State board of health
General director—
*L C Havens, M D , Montgomery.
*Sophie Dehler, assistant, Montgomery
Anniston branch—
*W O Hull, director, Anniston
Birmingham branch—
*E. K Kline, Dr P. H , director, Birmingham
Mobile branch—
*G E Davis, director, Mobile.
Tennessee Valley branch—
*A J Perolio, M D , director, Albany
Tuscaloosa branch—
*Katie Mae Wilson, director, Tuscaloosa
State sanitary engineer
*G H Hazelhurst, M C E , Montgomery.
Assistant sanitary engineers
*H G Menke, B. C E , Montgomery
*C C. Kiker, B C E , Montgomery.
*T H Milford, Montgomery
Epidemiologists
*D G Gill, M D , director, Montgomery
*A H Graham, M D , malariologist, Montgomery
County organization
*D L Cannon, M D , C P H , first director, Montgomery
*C N Leach, M D , I H B , second director, Montgomery
Public health nursing.
*Jessie L Marriner, R. N , director, Montgomery
*Francis Montgomery, R N , assistant director, Montgomery.
*Anne Morrison, R N , assistant director, Montgomery
Venereal disease control·
*W C Blasingame, director, Montgomery
Inspection·
*C A. Abele, director, Montgomery.
*H. J. Thrasher, deputy inspector, Montgomery
*R F South, D. V. M., deputy inspector, Montgomery.
Inspection—Continued
*C H South, deputy inspector, oyster control, Mobile
*L C Frank, U S P H S , associate sanitary engineer in charge of milk inspection, Montgomery
*J. W Garrett, milk inspector, Montgomery
*F A Clarke, D V M , milk inspector, Montgomery
*U D Franklin, milk inspector, Montgomery
*F H Downs, milk inspector, Montgomery.
Tuberculosis control
*J M Graham, director, Montgomery.
Chief clerk
*Bessie A Tucker, Montgomery.
Financial secretary
*Adna Eley, Montgomery
Appropriations for fiscal year ending September 30, 1926

Central administration	$150,000
County health work	55,000

ALASKA

Board of health
George A. Parks, governor, Juneau
Harry C De Vighne, M D , commissioner of health, Juneau
Executive health officer
Harry C De Vighne, M D., commissioner of health, Juneau
Assistant commissioners of health
Curtis Welch, M D , Nome.
J A Sutherland, M D , Fairbanks
W W Council, M D , Cordova.
Appropriation for 1925-26, $14,100

ARIZONA

State board of health
George W. P Hunt, governor, president, Phoenix
John W Murphy, attorney general, vice president, Phoenix.
F T Fahlen, M D , secretary, Phoenix.
Executive health officer
F. T. Fahlen, M. D , State superintendent of public health, Phoenix
Executive secretary.
*Texana Lea Williams, Phoenix.
State registrar of vital statistics:
F T Fahlen, M D , Phoenix
Child hygiene division.
*Mrs Charles R. Howe, director, Phoenix.
*Carolina Valenzuela, R N , field nurse
*J Frances Ross, R N , field nurse
*Mary S Kelleher, R N , field nurse
State bureau of vital statistics
*Mrs Ruby L Jacquemin, statistician, Phoenix
Director State laboratory·
*Miss Jane H Rider, Tucson.
Appropriations for fiscal year ending June 30, 1926·
State board of health—

Salaries	$12,300.00
Operating expense	6,450 00
Traveling expense	2,800 00
Capital investment	175.00
Repairs and replacements	130.00

Appropriations for fiscal year ending June 30, 1926—Continued

State laboratory, Tucson—

Salaries	$4,500 00
Operating expense	600 00
Traveling expense	250 00
Capital investment	200 00

Child hygiene, division, Sheppard-Towner work—

Salaries	3,625 00
Operating expense	375 00
Traveling expense	1,000 00
Unexpended balance of 1925 funds	8,325 82
Total	40,730 82

ARKANSAS

Board of health

A S Gregg, M D, president, Fayetteville
E H Stevenson, M D, Fort Smith
O L Williamson, M D, Marianna
R O Norris, M D, Tuckerman
L. L Marshall, M D, Little Rock.
S A Southall, M D, Lonoke.
F O Mahony, M D, El Dorado

Executive health officer

*C W Garrison, M D., State health officer, Little Rock

Bureau of vital statistics

*Mrs Mary Ellis Brown, statistician, Little Rock

Hygienic laboratory

*H V Stewart, associate director, Little Rock

Bureau of sanitation and malaria control

*M Z Bair, chief sanitary engineer, Little Rock.

Bureau of venereal disease control

*C W Garrison, M D, director, Little Rock

Bureau of child hygiene

*Margaret Koenig, M. D, associate director, Little Rock

Appropriations for biennial period ending June 30, 1927:

Executive department, salaries and miscellaneous	$27,800
Bureau of vital statistics	30,800
Payment of local registrars	30,000
Bureau of venereal disease control	25,000
Malaria control	10,000
Bureau of sanitation	16,600
Bureau of child hygiene	12,000
Hygienic laboratory	18,440
Total	170,640

CALIFORNIA

Board of health.

George E Ebright, M D., president, San Francisco
Fred F. Gundrum, M D., vice president, Sacramento
Walter M. Dickie M D., secretary, Sacramento.
A. J. Scott, jr., M. D, Los Angeles.
Edward F. Glaser, M D., San Francisco
Adelaide Brown, M D., San Francisco.
Robert A. Peers, M. D., Colfax.

Executive health officer:

*Walter M Dickie, M D, secretary and executive officer, State board of health, Sacramento.
*Daniel H Blood, assistant to secretary, Sacramento

Epidemiologist

*Charles H Halliday, M D, Berkeley
*Paul M Ellwood, M D, assistant epidemiologist, Berkeley

District health officers

*Allen F. Gillihan, M D, northern division.
*Gavin Telfer, M D, southern division.

Sanitary inspector

*Edward T Ross, Sacramento

Cannery inspector

*Milton P Duffy, San Francisco

Bureau of vital statistics

*L E Ross, director, Sacramento

Bureau of registration nurses

*Anna C Jamme, R N, director, San Francisco

Bureau of tuberculosis

*Edythe L M Tate-Thompson, director, Sacramento

Bureau of food and drugs

*M E Jaffa, director, Berkeley

Bureau of communicable diseases

*W H Kellogg, M D, director, Berkeley

Bureau of Sanitary engineering

*C G Gillespie, C E, director, Berkeley.

Bureau of child hygiene

*Ellen S Stadtmuller, M D, director, San Francisco

Appropriations for biennial period ending June 30, 1927

Administration—

Salaries	$316 085
Support	132,885

Nurses' bureau—

Salaries	24,360
Support	9,820

Tuberculosis (office)—

Salaries	24,000
Support	21,000
Tuberculosis (subsidies)	400 000
Total	928,150

Other sources of revenue

Fees for registration of nurses, $15 each
Renewal of registration certificates, $1 per year.
Licensing of cold-storage warehouses, rated according to capacity
Fines for violation of pure food and drugs act.
Fees for certified copies of records

Publications issued by health department

Biennial report
Weekly bulletin

COLORADO

Board of health.

Charles W. Thompson, M D, president, Pueblo.
J M Barney, M. D., vice president, Denver.
S R McKelvey, M D, secretary, Denver.
Tracy R Love, M D, Denver
M Ethel V Fraser, M D, Denver.
Ralph M. Jones, D O, Denver
Sherman Williams, M. D., Denver.

Board of health—Continued.
- A W Scott, Fort Collins
- G K Olmsted, M D, Denver.

Executive health officer
- *S R McKelvey, M D, secretary State board of health, Denver.

Bacteriologist
- William C Mitchell, M D, Denver

Medical inspector
- J W Morgan, M D, Denver.

State food and drug commissioner
- *S. H Loeb, Denver.

Division of venereal diseases
- *S R McKelvey, M D, director, Denver

Division of sanitary engineering
- *Dana E Kepner, director, Denver

Appropriations for fiscal year ending November 30, 1926

Salaries	$14,000
Laboratory equipment and supplies	1,250
Printing and publications	1,250
Traveling expenses	4,400
Samples and supplies	600
Sanitary engineering	7,000
Venereal diseases	20,000
Incidental expenses	1,000
Total	49,500

CONNECTICUT

Public health council
- Edward K Root, M. D.
- S B Overlock, M. D
- C.-E A Winslow, D P H.
- James W Knox
- Edward P Jones
- James A Newlands

Executive health officer
- *Stanley H Osborn, M D., C. P. H., commissioner of health, Hartford

Bureau of preventable diseases
- *Millard Knowlton, M D, C P H, director

Bureau of vital statistics
- *William C Welling, director

Bureau of public health nursing
- *Margaret K Stack, R. N., director.

Bureau of child hygiene
- *A Elizabeth Ingraham, M D

Bureau of public health instruction
- *Elizabeth C Nickerson, C P. H

Bureau of laboratories:
- *F Lee Mickle, director

Bureau of sanitary engineering
- *Warren J Scott, director.

Division of venereal diseases
- Daniel E Shea, M D, director.

Division of mental hygiene
- H A Bancroft, M D

Division of mouth hygiene:
- Clyde R Salmons, M D.

Appropriation for fiscal period ending June 30, 1927, $427,100 00

Publications issued by health department.
- Weekly bulletin
- Monthly bulletin.
- Annual vital statistics report
- Annual report of State department of health.
- Miscellaneous pamphlets.

DELAWARE

State board of health
- William P Orr, M D, president, Lewes
- Mrs Charles Warner, vice president, Wilmington
- Robert E Ellegood, M D, State Road
- Margaret I Handy, M D, Wilmington
- Mrs Julia Asnbrook, Wilmington
- Mrs Harlan I Husten, secretary, Seaford.
- W P Pierce, M D, Milford

Executive health officer
- *Arthur T. Davis, M D, Dover

Pathologist and bacteriologist
- *Rowland D Herdman, Dover

Tuberculosis
- *Lawrence D Phillips, M D, Dover.

Division of child hygiene
- *Clealand A Sargent, M D, Dover.

Supervisor of nurses
- *Marie T Lockwood, R N, Middletown.

Sanitary Engineer
- *Richard C Beckett, Dover

Superintendent of Brandywine Sanatorium.
- *Seth Hurdle, M D, Marshallton

Superintendent of Edgewood Sanatorium
- *Elizabeth Van Vranken, R. N, Marshallton.

Appropriations for each fiscal year ending June 30, 1926, and June 30, 1927

General administration	$8,500
Vital statistics	2,000
Venereal disease	2,000
Pathological and bacteriological laboratory	9 000
Diphtheria antitoxin	3,000
Child welfare	25,000
Tuberculosis	20,000
Brandywine sanatorium for white patients	40,000
Edgewood sanatorium for colored patients	12,000
Total	121,500

Publications
- Biennial report.
- Monthly Health News.
- Bulletin on health subjects.

DISTRICT OF COLUMBIA

Executive health officer
- *William C Fowler, M D, health officer, Washington

Assistant health officer
- *Rowland H Ford, M D, Washington

Chief clerk and deputy health officer
- *Arthur G Cole, Washington

Chief bureau of preventable diseases and director bacteriological laboratory:
- *James G. Cumming, M D, Washington.

Bacteriologist
- *John E Noble, Washington

Serologist:
- *Jesse P Porch, D. V M, Washington

Chemist
- *Aubrey V Fuller, Washington.

Chief sanitary inspector
- *C R. Holman, Washington

Chief food inspector
*Reid R Ashworth, D V S, Washington.
Chief medical and sanitary inspector of schools:
*Joseph A Murphy, M D, Washington
Appropriations for the fiscal year ending June 30, 1927

Salaries	$151,100
Prevention of communicable diseases	40,000
Disinfecting service	6,000
Isolation wards at hospitals	23,000
Milk and food inspection and regulation	6,290
Dispensary service, including treatment of tuberculosis and venereal diseases	15,000
Maintaining a child hygienic service	33,000
Hygiene and sanitation, public schools	66,800
Miscellaneous	10,250
Total	351,350

Publications issued by health department
Weekly report by health department
Annual report of health officer
Monthly statement of average grade of milk sold

FLORIDA

Board of health
Chas H Mann, president, Jacksonville
H Mason Smith, M. D, Tampa
W D Nobles, M D, Pensacola.
Executive health officer
*B. L Arms, M. D, State health officer, Jacksonville
Diagnostic laboratories:
* ———————
Bureau of vital statistics
*Stewart G. Thompson, D P. H, director, Jacksonville
Bureau of communicable diseases
*F A Brink, M D., director, Jacksonville
Bureau of sanitary engineering
*E L Filby, C E, director, Jacksonville
Bureau of child hygiene and public health nursing
*Mrs Laurie Jean Reid, R N, director, Jacksonville
Appropriation for health department
One-half mill tax levied upon the assessable property of the State
Publications issued by health department
Pamphlets covering all phases of public health
Public health information disseminated through the weekly and daily papers of the State
Florida health notes
Annual reports.

GEORGIA

Board of health
Robert F Maddox, president, Atlanta
James H. McDuffie, M D, vice president, Columbus
T. F Abercrombie, M D, secretary, Atlanta.
Charles H. Richardson, M D, Macon.
A. D. Little, M D, Thomasville
John W Daniel, M. D., Savannah
W I Hailey, M D., Hartwell,
Fred D. Patterson, M D, Cuthbert
John A. Rhodes, M. D., Crawfordville

Board of health—Continued
A C Shamblin, M D, Rome.
C R Brice, D D S, Gainesville.
A A Lawry, D D S, Valdosta
M S Brown, M D, Fort Valley
F A Land, State superintendent of schools, ex officio, Atlanta
Peter F Bahnsen, State veterinarian, ex officio, Atlanta
Executive health officer
*T F Abercrombie, M. D, commissioner, Atlanta
*Joe P Bowdoin, M D, deputy commissioner, Atlanta
Division of venereal-disease control
*Joe P Bowdoin, M D, director, Atlanta.
Division of county health work
*M E Winchester, M D, director, Atlanta.
Division of laboratories
*T F Sellers, director, Atlanta
Division of sanitary engineering
*L M Clarkson, director, Atlanta
State tuberculosis sanatorium:
*Edson W Glidden 2d, M D, superintendent, Alto
Bureau of vital statistics:
*Butler Toombs, acting director, Atlanta
Division of child hygiene
*Joe P Bowdoin, M D, director, Atlanta.
Georgia training school for mental defectives
*John W Oden, M D., superintendent
Division of accounting and purchasing
*C L Tinsley, director, Atlanta
Appropriations for the fiscal year ending Dec. 31, 1926:

General appropriation	$81,431
Venereal-disease control	10,000
Maternity and infant hygiene	5,000
State tuberculosis sanatorium	50,000
Georgia training school for mental defectives	35,000
Total appropriation by legislature	181,431
Maternity and infancy	17,180
Maternity and infancy (Federal Government funds, fiscal year ending June 30, 1926)	27,180
Central administration, county health work (International Health Board funds)	4,000
Central administration, malaria control (International Health Board funds)	3,500
Grand total	233,291

Special appropriation for construction and equipment of State tuberculosis sanatorium, Alto, Ga, year 1924, $250,000, year 1925, $250,000; total, $500,000

HAWAII

Board of health.
F E Trotter, M. D, president and executive officer, Honolulu.
W B Lymer, attorney general, Honolulu.
C B Cooper, M D, Honolulu.
D S. Bowman, Honolulu
J D. McVeigh, Honolulu

Board of health—Continued
J Ordenstein, Honolulu.
George Denison, Honolulu
Executive health officer
*F E. Trotter, M D , president of the board of health, Honolulu.
Secretary
*M R Weir, Honolulu
Bacteriologist
A N Sinclair, M. D , Honolulu
Tuberculosis bureau
A L Davis, M D , physician, Honolulu
Health officer
James T Wayson, M D , Honolulu
Sanitary engineer
*S W Tay, Honolulu
Food commissioner and analyst.
*M B Bairos, Honolulu
Oahu Insane Asylum
*A B Eckerdt, M D , superintendent, Honolulu
Leper settlement
*R L Cooke, superintendent, Kalaupapa, Molokai
*A B Potter, M D , physician, Kalaupapa, Molokai
Chief sanitary inspector, Oahu
*A K Arnold, Honolulu.
Chief sanitary inspector, Hawaii.
*C Charlock, Hilo
Chief sanitary inspector, Maui
*R C Lane, Wailuku
Chief sanitary inspector, Kauai:
*A C Christian, Kapaa
Appropriations, 1925-1927:

Board of health—		
Salary, president	$14,400 00	
Salary, public health officer	8,400 00	
Salary, secretary	7,200 00	
Salaries, office employees	27,700 00	
Expenses, office	22,600 00	
Expenses, board of medical examiners—		
Personal service	600.00	
Expenses	400 00	
Bureau of vital statistics—		
Salary, registrar general	6,000 00	
Salaries, deputies and clerks	20,400.00	
Salaries, registrar, Honolulu	3,600 00	
Expenses, office registrar general	14,450 00	
Purchase of equipment	5,000 00	
Bureau of sanitary engineering—		
Salary, sanitary engineer	9,600 00	
Other personal service	4,025 00	
Expenses	2,375 00	
Sanitation		
Salary, chief sanitary inspector, Oahu	7,200 00	
Salaries, clerks, sanitary and mosquito inspectors, Oahu	73,680 00	
Salary, chief sanitary inspector, Hawaii	9,600 00	
Salaries, sanitary inspectors and clerks, Hawaii	36,600.00	
Salary, chief sanitary inspector, Maui	5,400.00	
Salary, assistant sanitary inspector	3,000 00	
Salary, clerk	1,800 00	
Sanitation—Continued		
Salary, chief sanitary inspector, Kauai	$5,400 00	
Salary, assistant sanitary inspector	3,000 00	
Sanitary expenses, Territory	28,350 00	
Salaries and expenses, plague campaign	65,690 00	
Expenses, mosquito campaign	7,500 00	
Pure food and drug bureau		
Salaries	21,600 00	
Expenses and assistants	4,800.00	
Bacteriological bureau		
Salary, bacteriologist and pathologist	6,000 00	
Other personal services	1,000 00	
Expenses and assistants	4,000 00	
Government physicians		
Salaries	74,160 00	
Hawaii	$31,560 00	
Maui	18,600 00	
Kauai	10,200 00	
Oahu	12,000 00	
Lanai	1,800 00	

(Provided, however, that no salary shall be allowed or paid unless physicians employed or appointed in the several districts shall treat the indigent sick free of charge in such district or districts, as the case may be)

Quarantine and medical service		
Salaries		23 000 00
Expenses		37,450.00
Quarantine stations		
Repairs maintenance, equipment, and salaries, Honolulu; Repairs, maintenance, equipment, and salaries, Hilo		24,850 00
Care of lepers and their children		

KALAUPAPA

Salary, superintendent		9,600 00
Salary, physician		10,800 00
Salary, dentist (not prorated)		8,100.00
Salaries, assistants and attendants, Bishop Home and Baldwin Home		9,200 00
Salaries, sheriff and police		4,800 00
Allowance, needy blind patients, extra $5 per month		5,000.00
Lighting plants	$3,500 00	
Oil and gas tanks	3,000 00	
Furniture	605 00	
		7,105.00

KALIHI HOSPITAL

Salary, matron	4,200 00
Salary, officer for lepers	4,200 00

KALAUPAPA AND KALIHI

Wages, nurses, laborers, attendants, and mechanic	175,700.00
Expenses, segregation hospitals and maintenance	455,044.00

KAPIOLANI GIRLS' HOME

Salaries	14,280 00
Maintenance	30,500 00

Care of lepers and their children—Continued

KALIHI BOYS' HOME

Salaries	$24,240 00
Maintenance	28,950 00
Prevention and cure of tuberculosis	
Salaries	87,600 00
Expenses, including purchase of automobile	60,650 00
Care and treatment of tubercular patients in sanatoriums	403,180 00
Oahu, Leahi Home $165,000	
Maui, Kula Sanatorium 84,000	
Kauai, Samuel Mahelona Memorial Hospital 60,000	
Hawaii, Puumaile Home 79,480	
Improvements, Puumaile Home 14,700	
Insane asylum	
Salary, superintendent	8,400 00
Pay roll	155,210 00
Maintenance	131,500 00
New buildings for female patients	10,000 00
Compensation to patients for labor	2,500 00
Other equipment	1,375 00
Sanitarium	
Salaries, employees	21,120 00
Maintenance	16,800 00
Venereal-disease clinic	
Salaries	11,400 00
Expenses	5,400 00
Bureau welfare and hygiene of maternity and infancy	
Expenses	10,101.92
Equipment	3,350 00
Total	2,341,205 92

Publications issued by health department
Annual report of president
Registrar general's report

IDAHO

Department of public welfare
*David Burrell, commissioner
*R M Fouch, M D, public health adviser.
*Lawrence J Peterson, bacteriologist
*William Vernon Leonard, chemist
*A H. Wilson, dairy, food, drug, hotel and sanitary inspector
*C K Macey, dairy, food, drug, hotel and sanitary inspector
Executive health officer
*David Burrell, commissioner of public welfare, Boise

Appropriation for biennial period ending December 31, 1926.

Personal service	$45,240 00
Other expense	13,205 00
Venereal-disease control	6,200 00
Total	64,645 00

ILLINOIS

Board of public health advisors
T D Doan, M D, president
Herman N Bundesen, M D, secretary.
W A Evans, M D
E P Sloan, M D
Mrs E N Monroe
Director of public health
*Isaac D Rawlings, M D, Springfield.
Assistant director of public health
*Thomas H Leonard, M D
Division of sanitation and engineering
*Harry F Ferguson, C E, chief sanitary engineer
Division of communicable diseases
*J J McShane, M D, D P H, chief
Division of child hygiene and public-health nursing
*Grace S Wightman, M D, superintendent.
Division of tuberculosis
*Thomas H Leonard, M D, acting chief
Division of laboratories
*Thomas G Hull, Ph D, chief
Division of vital statistics
*Sheldon L Howard, registrar
Division of public-health instruction
*Baxter K Richardson, chief
Division of social hygiene
*C C Copelan, M D, chief
Division of hotel and lodging-house inspection
*Arch Lewis, superintendent

Appropriations for biennial period ending June 30, 1927

Salaries	$648,730
Salaries State officers	30,400
Office expenses	21,030
Traveling expenses	123,600
Operating, supplies and expenses	188,076
Equipment and repairs	28,101
Contingent	27,700
Printing	45,000
Postage	17,250
Pasteurization of milk	5,000
Rabies	4,000
Total	1,138,887

Publications issued by health department
Illinois Health News (monthly)
Weekly press bulletin

INDIANA

Board of health
John H Green, M D, president, North Vernon
T Victor Keene, M D, vice president, Indianapolis
Homer C Haas, M. D, Peru
James A Turner, M D, Nashville
William F King, M D, secretary, Indianapolis
Executive health officer.
*William F King, M D., State health commissioner, Indianapolis.
Division of vital statistics
*H M Wright, director, Indianapolis
Laboratory of hygiene
*Thurman B Rice, M D, director, Indianapolis.

Division of food and drugs:
*Ivy L Miller, State food and drug commissioner, Indianapolis.
Milk laboratory
*Frank C Wilson, director, Indianapolis
Water and sewage laboratory
*Lewis S Finch, sanitary engineer, Indianapolis
Division of child hygiene
*Ada E Schweitzer, M. D, director, Indianapolis
Division of communicable diseases
*H W McKane, M D, director, Indianapolis
Epidemiologist.
*Walter W Lee, M. B.
Division of school hygiene
*H R Condrey, director, Indianapolis.
Division of housing
*A E Wert, director, Indianapolis.
Department of public health nursing
*Isabel Glover, R N, director, Indianapolis
Appropriations for biennial period ending September 30, 1927, $176,000 per annum

IOWA

Board of health
H L Saller, M. D, president, Des Moines
John Hammill, LL B, governor, Des Moines
W C Ramsay, secretary of state, Des Moines
J C McClune, LL B, auditor of state, Des Moines
R E Johnson, treasurer of state, Des Moines
M G Thornburg, secretary of agriculture, Des Moines
Don M Griswold, M D, D P H, Des Moines
E M Williams, M D., Oskaloosa
C W Stewart, M D., Washington.
H E Sugg, M D, Clinton.
W D Hayes, C D H, Sioux City.
Executive health officers
*Henry Albert, M D, State health commissioner, Des Moines
Director county health and associate in administration
James Wallace, M D, C P H.
Director public health nursing:
Edith Swaine, R N
Director division of examinations
*H. W Grefe, Des Moines
Chief clerk
*L V Clemens, Des Moines
Laboratories
*Don M Griswold, M. D, D P H, director, Iowa City
Sanitary engineer:
*Hans V Pedersen, Des Moines

Appropriations for fiscal year ending June 30, 1926

State department of health work	$17,350
Bacteriological laboratory	15,000
Antitoxin department	2,000
Salaries of employees	44,060
Total	78,410

Housing department, vital statistics, and social hygiene combined in State department of health appropriation.
(The above includes special appropriation for clerical assistance)

Publications issued by health department:
Biennial report
Quarterly bulletin.
Health News Letter

KANSAS

Board of health
Clarence A McGuire, M D, president, Topeka
Walter A Carr, M D, Junction City
George I Thacher, M D, Waterville
John H Henson, M D, Mound Valley
Addison Kendall, M D, Great Bend
Clay E Coburn, M D, Kansas City
Arthur J Anderson, M D, Lawrence
V C Eddy, M D, Colby
Walter J Eilerts, M D, Eldorado
Thomas Amory Lee, attorney, Topeka
Executive health officer
*Earle G Brown, M D, secretary State board of health, Topeka.
Division of vital statistics
*W J Davies, acting State registrar
Division of communicable diseases
*C H Kinnaman, M. D, epidemiologist, Topeka.
Divisions of foods and drugs
*Thomas I Dalton assistant chief food and drug inspector, Topeka.
Division of child hygiene
*J C Montgomery, M D, chief, Topeka
Division of rural sanitation
*J C Montgomery, M D, director, Topeka
Division of water and sewage
Ernest Boyce, chief, Lawrence
Division of public health education.
Earle G Brown, M. D, director, Topeka
Division of venereal diseases
Earle G Brown, M D, director, Topeka
Water and sewage laboratories at Kansas University
Ernest Boyce, director, Lawrence
Food laboratory at Kansas University.
Prof. E. H S. Bailey, director of food analysis, Lawrence
Drug laboratory at Kansas University:
Prof. L. D Havenhill, director of drug analysis, Lawrence
Food laboratory at Kansas Agricultural College
Prof H H King, director of food analysis, Manhattan
Public health laboratory, Topeka.
Earle G Brown, M D, acting director, Topeka

Appropriations for fiscal year ending June 30, 1926

Salaries	$20,700
Miscellaneous	3,500
Water and sewage division	3,000
Free distribution of antitoxins, etc	3,500
Public health laboratory, and the department of division of venereal disease control; distribution of arsphenamine (606) to the indigent poor of the State, assistance and maintenance of clinics	10,000
Division of child hygiene	5,000
Division of food and drugs	6,000
Total	51,700

Other sources of revenue:
Marriage fees, approximately $20,000
Water and ice analysis fees, approximately $14,000
Food and drug laboratories at Kansas University maintained by university maintenance fund, and food laboratory at Kansas Agricultural College maintained by agricultural college maintenance fund
Publications issued by health department
Quarterly bulletin
Biennial report
Weekly morbidity report

KENTUCKY

Board of health
Joseph E Wills, M D, president, Cynthiana
A T McCormack, M D, secretary, Louisville
J Watts Stovall, Grayson
V A Stilley, M D, Benton
George T Fuller, M D, Mayfield
H H Carter, D O Shelbyville
George S Coon, M D, Louisville
J W Kincaid, M D, Catlettsburg.
Addison Dimmitt, Louisville
Executive health officer
*A T McCormack, M D., D. P H., State health officer, Louisville
Bureau of vital statistics
*J F Blackerby, director, Louisville
Bureau of bacteriology.
*Lillian H South, M D., director, Louisville
Bureau of sanitary engineering
*F C Dugan, C E, director, Louisville
Bureau of food, drugs, and hotels
*Sarah Vance Dugan, director, Louisville.
Bureau of venereal diseases
Jethra Hancock, M D, Louisville
Bureau of public health nursing
*Margaret East, R N, director, Louisville
Bureau of maternity and child health
*Annie S Veech, M D, director, Louisville
*Juanita Jennings, M D, assistant, Louisville
*Frances Rathert, M D, assistant, Louisville
Bureau of prevention of trachoma and blindness
*C B Kobert, M. D, director, Louisville.
*J W Duke, M D, assistant, Louisville
Bureau of public health education
*Adelbert Thomas, educational secretary
Bureau of county health work
*P E Blackerby, M D, director and assistant State health officer, Louisville.
Bureau of mental hygiene
Frank O'Brien, Ph D, director, Louisville.
Bureau of tuberculosis and State tuberculosis sanitarium
*Paul A Turner, M D, director and superintendent, Louisville
Total income for fiscal year ending June 30, 1926, $261,877 67
Publications issued by health department.
Monthly bulletin

LOUISIANA

Board of health
Oscar Dowling, M D, president, Shreveport
T T Tarlton, M D, vice president, Grand Coteau
Miss Fannie B Nelken, secretary
Fred Ratzburg, D D S, Shreveport
E S Matthews, M D, Bunkie
Mrs L C McVoy, Baton Rouge
M P Boebinger, M D, New Orleans
A O Hoefeld, M D, New Orleans
T E Wright, M D., Monroe
T J Labbe, St Martinville
Executive health officer
*Oscar Dowling, M D, president State board of health, New Orleans
Bacteriologist
W H Seemann, M D, New Orleans
Registrar
J E Doussan, M D, New Orleans
Sanitary engineer
*John H O'Neill, New Orleans
Child hygiene
*Agnes Morris, director, New Orleans
Maud Loeber, M D, medical consultant, New Orleans
Food and drug commissioner
*E S Kelly, M D, New Orleans
Analyst
*Cassius L Clay, New Orleans
Bureau of research and information
*Leonard C Scott, acting assistant surgeon, U S P H S, New Orelans
Bureau of public health administration
*K. E Miller, surgeon, U. S P H S, New Orleans
Bureau of tuberculosis control
D E Brown, M D, director, New Orleans
Appropriations for fiscal year ending June 30, 1926, $75,000
Other source of revenue
Fees from inspection of oil.
Publications issued by health department
Monthly bulletin
Quarterly bulletin.
Annual almanac
Biennial report
Miscellaneous leaflets

MAINE

Public health council
C F Kendall, M D, chairman, Augusta
Hiram Ricker, South Poland
H A Kelley, D D S, Portland
Miss Annie Peabody, Portland
J G Towne, M D., Waterville
O R Emerson, M D, Newport
Executive health officer.
*C F Kendall M. D., State commissioner of health, Augusta
Division of administration
*C F Kendall, M D, Augusta
Division of communicable diseases.
*G H Coombs, M. D., director, Augusta

Division of laboratories
*Walter C Nelson, Ph D, Augusta
Division of sanitary engineering
*Elmer W Campbell, D P H, Augusta
Division of vital statistics
*C F Kendall, M D, State registrar, Augusta.
Division of social hygiene
*George H Coombs, M D, director, Augusta
Division of public health nursing and child hygiene
*Edith L Soule, R N., Augusta
Division of dental hygiene
*Dorothy Bryant, D H, Augusta
District health officers
*J L Pepper, M D, South Portland
*E P Goodrich, M D, Lewiston
*H D Worth, M D, Bangor
*G H Hutchins, M D, Waterville
*L W Hadley, M D, Machias
*G E Parsons, M D, Rockland
*B F Porter, M D, Caribou

Appropriations for fiscal year ending June 30, 1927

Salaries and clerk hire	$33,000
Office expense and epidemic fund	20,000
District and local health officers	38,000
Venereal-disease control work	14,000
Maternity and child-welfare work	10,000
Branch State laboratory, Caribou	2,500
Total	117,500

Other sources of revenue
Census Bureau, Washington, D C, about $800
International Health Board, $2,000
Cumberland County public health association $500
Publications issued by the department of health
Annual report on vital statistics

MARYLAND

Board of health
John S Fulton, M D, chairman, Baltimore
William H Welch, M. D, Baltimore
Thomas H Robinson, attorney general, Baltimore
William W Ford, M D, Baltimore
C. Hampson Jones, M. D, Baltimore
Tolley A Biays, Baltimore
Benjamin C Perry, M D, Bethesda
E F Kelly, Phar D, Baltimore
Executive health officer
*John S Fulton, M. D., director of health, Baltimore.
Division of legal administration
*J Davis Donovan, chief, Baltimore
Division of public health education·
*Gertrude B Knipp, chief, Baltimore.
Bureau of communicable diseases
*Robert H Riley, M D, chief, Baltimore
Bureau of vital statistics
Frederic V Beitler, M D, chief, Baltimore
Food and drug commissioner
*A L Sullivan, chief, Baltimore
Bureau of bacteriology·
H C Ward, chief, Baltimore
Bureau of sanitary engineering
*Abel Wolman, B S E, chief, Baltimore.

Bureau of chemistry
*Wyatt W Randall, Ph D, chief, Baltimore
Bureau of personnel and accounts
*Walter N Kirkman, chief, Baltimore
Bureau of child hygiene
*J H Mason Knox, jr, M D chief, Baltimore
Appropriations for fiscal year ending Sept 30, 1925

Salaries	$221,600
Expenses	103,615
Total	325,215

Publications issued by health department
Annual report
Weekly News Letter

MASSACHUSETTS

Public health council
George H Bigelow, M D, chairman, Boston.
Roger I Lee, M D, Boston
Francis H Lally, M D, Milford
Richard P Strong, M D., Boston
Sylvester E Ryan, M D, Springfield
James L Tigne, Holyoke
Gordon Hutchins, Concord
Executive health officer
*George H Bigelow, M D, State commissioner of public health, Boston
Secretary
*Alice M Ethier
Division of administration
(Under direction of commissioner)
Division of communicable diseases
*Clarence L Scamman, M D, director, Boston.
Division of sanitary engineering
*X H Goodnough, C E, director and chief engineer, Boston
Division of water and sewage laboratories·
*H W Clark, director and chemist, Boston
Division of biologic laboratories
*Benjamin White, Ph D, director and pathologist, Boston
Division of food and drugs·
*Herman C Lythgoe, director and analyst, Boston
Division of hygiene
*Merrill E Champion, M D, director, Boston.
Division of tuberculosis sanatoria
*Henry D Chadwick, acting director, Boston.
Appropriations for department of public health, 1926

Division of administration—	
Salary of commissioner	$7,500
Personal services	13,000
Services other than personal	7,625
Division of hygiene—	
Personal services of director and assistants	29,600
Services other than personal	18,150
Personal services in connection with maternal and infant hygiene	24,000
Expenses in connection with maternal and infant hygiene	11,400
Division of communicable diseases—	
Personal services of director, district health officers, etc.	53,000
Services other than personal	15,250

Appropriations for department of public health, 1926—Continued

Division of communicable diseases—Con

Personal services in connection with control of venereal diseases	$3,870
Expenses in connection with control of venereal diseases	21,500
Manufacture and distribution of arsphenamine—	
For personal services	8,250
Services other than personal	6,000
Wassermann Laboratory—	
For personal services	12,600
For expenses of laboratory	5,500
Antitoxin and vaccine laboratory—	
For personal services	46,000
Other services	30,500
Inspection of food and drugs—	
For personal services	40,310
Other services	10,790
Water supply and disposal of sewage, engineering division—	
For personal services	52,000
For other services	11,500
Water supply and disposal of sewage, division of water and sewage laboratories—	
For personal services	33,400
For other services	7,700
Division of tuberculosis—	
For personal services	36,500
Services other than personal	14,000
For personal services of tuberculosis clinic units	41,300
Services other than personal (clinic units)	33,500
Payment of subsidies	225,000
For maintenance of and for certain improvements at the Lakeville, North Reading, Rutland and Westfield State sanatoria	1,131,205
Special appropriations under legislative acts and resolves of 1926	135,500
Total	2,091,450

MICHIGAN

Advisory council of health
- Guy L Kiefer, M D, president, Detroit.
- C C Slemmons, M D, Grand Rapids
- Leland W Carr, Lansing
- Robert B Harkness, M D, Houghton
- Chalmers J Lyons, D D Sc, Ann Arbor.

Executive health officer
- *Richard M. Olin, M D, State health commissioner, Lansing

Deputy health commissioner:
- *———— ————

Bureau of Engineering
- *E D Rich, C E, director
- *William C Hirn, C. E, assistant engineer.
- *John M Hepler, assistant engineer
- *Willard F Shephard, B S E., assistant engineer
- *Raymond J. Faust, assistant engineer
- *Charles L Orr, water inspector

Bureau of laboratories:
- *C C Young, Ph D, D P H, director
- *Minna Crooks, bacteriologist
- *R L Kahn, immunologist
- *Pearl Kendrick, bacteriologist, West Michigan Division
- *Ora Mills, bacteriologist, Houghton branch.
- *E F Eldridge, chemist
- *Max Marshall, Ph D, research bacteriologist.
- *A B Haw, clinical pathologist
- *Chas L Bliss, toxicologist
- *Breese Robinson, superintendent, biologic plant

Bureau of child hygiene and public health nursing:
- *Lillian R Smith, M D, director
- *Dorothy L Green, M D, pediatrician
- *Rhoda Grace Hendrick, M D, prenatal consultant
- *Helen de Spelder Moore, R N, assistant director

Bureau of records and statistics
- *W J V Deacon, M D, director

Bureau of institutional health administration.
- *J H McCall, M D., director
- *C. V Spawr, M D, assistant director.
- *Wm J Cameron, M D, physician
- *Geo H Steel, D D S, dentist
- *Alan L Clark, D D S, dentist
- *A S Rowley, M D, psychiatrist
- *Florence Dizard, nutrition worker

Bureau of education
- *Marjorie Delavan, director
- *Frank A Poole, M D, lecturer.
- *Pearl Turner, assistant director
- *Melita Hutzel, lecturer

Bureau of embalming
- *F J Pienta, director.

Bureau of epidemiology
- *———— ————, director
- *F L Rose, M D, clinician
- *C H Benning, M D, medical inspector
- *Paul F Orr, M D, medical inspector

Bureau of oral hygiene and preventive dentistry
- *William R Davis, D D S, director

Appropriations for fiscal year ending June 30, 1927

Personal service	$196,425
Supplies / Contractural service	85,000
Fixed charges	25,000
Outlay for equipment	14,000
Total	320,425
Institutional health—	
Personal service	28,000
Supplies / Traveling expense	7,300
Outlay for equipment	1,300
Total	36,600
Antitoxin operation	63,000
Child hygiene and public health nursing	30,000
Grand total	450,025

Publications issued by health department:
- Monthly bulletin
- Annual report.

Publications issued by health department—Con
Communicable disease pamphlets
Sex hygiene pamphlets
Child hygiene pamphlets.
Engineering bulletins
Scientific reprint series

MINNESOTA

Board of health
S Marx White, M D, president, Minneapolis
L P Wolff, C E, vice president, St Paul.
C L Scofield, M D, Benson
N M Watson, M D, Red Lake Falls
N G Mortensen, M D, St Paul
O F Mellby, M D, Thief River Falls.
R C Hunt, M D, Fairmont
H R Weirick, M D, Hibbing
J A Thabes, M D, Brainerd.
Executive health officer, Old Capitol, St Paul
*A J. Chesley, M D, secretary and executive officer
*Mildred G Smith, R N, educational agent
Division of records, Old Capitol, St Paul
*O. C Pierson, director
Division of vital statistics, Old Capitol, St Paul
*Gerda C, Pierson, director
Division of hotel inspection, capitol, St Paul
*W A Wittbecker, State hotel inspector
Division of preventable diseases, university campus, Minneapolis
*O. McDaniel, M D, director
*E M Wade, chief of laboratories.
W P Greene, M D, epidemiologist
Division of sanitation, university campus, Minneapolis
*H A Whittaker, director
*J A Childs, C E, sanitary engineer
Division of venereal diseases, university campus, H G Irvine, M D, director, Minneapolis
Division of child hygiene, university campus, Minneapolis
*Ruth E. Boynton, M D, director
*Olivia Peterson, R N, superintendent of public health nursing
Appropriations for fiscal year ending June 30, 1926

General fund	$20,000
Vital statistics	15,000
Hotel inspection	36,800
Preventable diseases	25,000
Preventable diseases laboratory	32,000
Sanitary engineering laboratory	13,000
Sanitary engineering	7,000
Free antitoxin	15,000
Prevention of blindness	1,000
Venereal diseases	30,000
Protection for maternity and infancy	21,000
Total	215,800

Other sources of revenue

Aid from county and city for branch laboratory at Duluth	1,416
Sheppard-Towner aid, $21,000, $5,000 (gift)	26,000

Publications issued by health department
Educational pamphlets
Biennial report.

MISSISSIPPI

Board of health
W. W Crawford, M D, president, Hattiesburg
F J Underwood, M D, secretary, Jackson.
S E Eason, M D, New Albany
L B Austin, M D, Rosedale
J W Lipscomb, M D, Columbus
T W Holmes, M D, Winona
J M Dampeer, M. D, Crystal Springs.
W H Watson, M D, Brandon
Dudley Stennis, M D, Newton
W R Wright, D D S, Jackson.
Executive health officer
*F. J Underwood, M D, executive officer, State board of health, Jackson
Bureau of vital statistics
*R N Whitfield, M D, director, Jackson
Bureau of child hygiene and public health nursing
*F J Underwood, M D, acting director, Jackson
*Mary D Osborne, R N, supervisor, public health nursing, Jackson
*Gladys Eyrich, supervisor oral hygiene
Hygienic laboratory:
*T W Kemmerer, M D, director, Jackson
Bureau of sanitary engineering and inspection
*H A Kroeze, C E, director, Jackson
*Geo Parker, C E, malarial control engineer
*N M Parker, D. V S, Jackson
Bureau of rural sanitation
*C C Applewhite, M D, director, Jackson
Bureau of communicable diseases
*Hardie Hayes, M D, director, Jackson
Appropriations for fiscal year ending Dec 31, 1926

Administrative office	$20,700
Bureau of vital statistics	12,000
Municipal sanitation	10,800
Rural sanitation	34,300
Hygienic laboratory	20,000
Child welfare	27,000
Communicable diseases	10,000
Total	134,800

Publications issued by health department
Biennial report
Weekly health letters published in all newspapers of the State

MISSOURI

Board of health.
W A Clark, M D, president, Jefferson City
H L Kerr, M D, vice president, Crane
James Stewart, M D, secretary, Jefferson City
H S Gove, M D, Linn.
H A Breyfogle, M D, Kansas City
T E McGough, M D, Richmond
Willard C Bartlett, M. D, St Louis
Executive health officer
*James Stewart M D State health commissioner, Jefferson City.
*Irl Brown Krause, M D, assistant State health commissioner
Rural sanitation
*Joseph Mountin, M. D, director

Epidemiology
* R L Russell, M D, assistant epidemiologist
* R L Laybourn, bacteriologist

Sanitary engineering
* W Scott Johnson, chief engineer

Vital statistics:
* Ross Hopkins, M D, statistician

Child hygiene:
* Irl Brown Krause, M D, director

Appropriations for biennial period ending Dec 31, 1926

Board of health—

Licensure	$20,000
Salaries	85,800
Contingent	36,000
Cooperative health work	100,000
Control of contagion	50,000
Total	291,800

Of the above appropriation, $78,000 is being withheld by the governor until State revenues are sufficient for release

MONTANA

Board of health.
E. G Balsam, M D, president, Billings
L H. Fligman, M. D, vice president, Helena
E M Porter, M D, Great Falls
B L Pampel, M D, Livingston
George M Jennings, M. D., Missoula

Executive health officer:
*W F. Cogswell M D. secretary, Helena.

Division of communicable diseases.
* W. F Cogswell, M D., director.

Division of child welfare:
* Hazel Dell Bonness, M D, Helena

Division of food and drugs
* Glenn D Wiles, director, Helena.

Division of vital statistics
* W F Cogswell, M D, State registrar, Helena
* L L Benepe, deputy State registrar, Helena

Division of water and sewage
* H B Foote, director, Helena
W. M. Cobleigh, consultant, Bozeman
* H. D Cashmore, analyst, Helena

Hygienic laboratory
* John X Newman, director, Helena
* Edith Kuhns, technician, Helena

Appropriations for the year ending June 30, 1926

Secretary's salary	$5,000
Salaries of other employees	17,550
Office supplies and expenses	1,500
Traveling expenses	3,000
Printing and binding	500
General supplies and expenses	4,250
Capital expenditures	125
Repairs	75
Division child welfare	10,700
Board of entomology (Rocky Mountain spotted fever work)	15,500
Total	58,200

Other sources of revenue.
Fees for embalmers' licenses.
Rockefeller foundation, $2,500

Publications issued by health department:
Special bulletins on communicable diseases.
Biennial report

NEBRASKA

Department of public welfare:
Lincoln Frost, secretary, Lincoln.
Bureau of health—
Executive health officer—
*W H Wilson, M D, chief, bureau of health, Lincoln
Collaborating epidemiologist—
*W H Wilson, M D, Lincoln
Assistant epidemiologist—
*P H Bartholomew, M D, Lincoln
Bacteriologist—
*L O Vose, Lincoln.
Division of laboratories—
*L O Vose, director, Lincoln
Division of venereal diseases—
*P H Bartholomew, M D, director, Lincoln
Statistician—
*Hattie M Summers, Lincoln.
Division of child hygiene—
*Louise M Murphy, R. N, director, Lincoln
Medical examining board—
J E Spatz, M D, Fairfield
E W Roe, M D, Lincoln
E T. McGuire, M D, Mead

Appropriations for biennial period ending June 30, 1927:

Salaries	$42,000
Maintenance	22,800
Total	64,800

NEVADA

State board of health
James G Scrugham, governor, president, Carson City
S L Lee, M D, secretary, Carson City.
W G Greathouse, secretary of state.
W H Hood, M. D., Reno
Henry Albert, M D, Reno.

Executive health officer
S L Lee, M D, secretary State board of health, Carson City

State hygienic laboratory at State University:
Henry Alber, M D, director, Reno

Appropriation for fiscal year ending Dec 31, 1924

Salary of secretary	$5,000
State board of health	3,800
Total	8,800

Publications issued by health department
Biennial report
Special bulletins

NEW HAMPSHIRE

Board of health
Robert Fletcher, C E, president, Hanover.
D E Sullivan, M. D, Concord.
George C Wilkins, M. D., Manchester.
Sibley G Morrill, M. D., Concord.
John G Winant, governor
Jeremy M. Waldron, attorney general, Portsmouth.

Executive health officer
Charles Duncan, M D., secretary State board of health, Concord
Harriet I Parkhurst, chief clerk, Concord.
Division of maternity, infancy, and child hygiene
Elena M Crough, R N, director and supervising nurse, Manchester
Department of vital statistics
Charles Duncan, registrar, Concord
Bertha M Watson, chief clerk, Concord
Laboratory of hygiene
*Charles D Howard, chemist, Concord.
John P Head, chemist
Herbert R Hill, pharmacist, Concord
William R McLeod, bacteriologist, Concord
*Joseph X Duval, inspector, Concord
Leonard W Trager, sanitary engineer, Concord
Bacteriological laboratory
Bernard E Proctor, P H D, sanitary engineer
H N Kingsford, M D, pathologist, Hanover.
Venereal-disease division.
*Charles A Weaver, M D, Manchester
Appropriations for fiscal year ending June 30, 1926

State board of health	$36,138 61
Laboratory of hygiene	17,150 00
Vital statistics	3,050 00
Total	56,338 61

Publications issued by health department
Bulletin
Biennial report.

NEW JERSEY

Board of health
Clyde Potts, C E, president, Morristown.
David D Chandler, vice president, Newark
H E Winter, V M D, Plainfield
J Oliver McDonald, M D, Trenton
Harold J Harder, C E, Paterson.
Henry Spence, M D, Jersey City.
Mrs James E Van Horne, Trenton
Miss Margaret McNaughton, Jersey City.
J E H Guthrie, D. D S, Newark
J Lynn Mahaffey, M D, Camden
Charles I Lafferty.
Executive health officer
*Henry B Costill M D, director of health, Trenton
Bureau of bacteriology
*John V Mulcahy, chief, Trenton.
Bureau of chemistry
*John E Bacon, chief, Trenton
Bureau of administration
*Charles J Merrell, chief, Trenton.
Bureau of food and drugs

*Walter W Scofield, chief, Trenton.
Bureau of child hygiene
Julius Levy, M D, consultant, Trenton
Bureau of local health administration
*David C Bowen, chief, Trenton
Bureau of engineering
*H. P Croft, chief, Trenton
Bureau of vital statistics
*David S South, chief, Trenton.
Bureau of venereal disease control:
A J Casselman, M D, consultant, Trenton.

Appropriations for fiscal year ending June 30, 1926:

Salaries	$156,920
Miscellaneous	72,300
Child hygiene	65,000
Venereal disease control	25,000
Tuberculosis	10,000
Total	329,220

Publications issued by health department
Monthly bulletin
Annual report.

NEW MEXICO

Board of public welfare:
R O Brown, M D, chairman, Santa Fe.
Mrs Francis S Wilson, secretary, Santa Fe
Mrs C C Meacham, Albuquerque
Mr Joseph Gill, Albuquerque
H A Miller, M D, Clovis
Executive health officer
*G. S Luckett M D, director of public health, Santa Fe
Division of preventable diseases.
*G S Luckett, M D, chief, Santa Fe.
Division of vital statistics
*P M Ruleau, chief, Santa Fe.
Division of sanitary engineering and sanitation:
*Paul S Fox, M S, in C E, chief, Santa Fe.
Division of public health nursing and child hygiene:
*Dorothy R Anderson, R N, Santa Fe.
Division of county health work
*D B Williams, M. D, chief, Santa Fe.
Public health laboratory
*Myrtle Greenfield, chief, Albuquerque.
Appropriation for years 1926 and 1927, per annum, $24,500 Fiscal year ends June 30

NEW YORK

Public health council:
Simon Flexner, M D, LL D, chairman, New York
Homer Folks, LL D, vice chairman, New York.
Henry N Ogden, C E, Ithaca
Frederick F Russell, M. D., New York.
Jacob Goldberg, M D, Buffalo
Stanton P Hull, M D., Petersburg
Matthias Nicoll, jr, M D, commissioner of health, Albany
Edward H Marsh, M D, secretary, New York City
Executive health officer.
*Matthias Nicoll, jr, M. D., commissioner of health, Albany.
Deputy commissioner of health
*Paul B Brooks, M D, Albany.
Secretary
*Edward H Marsh, M D, New York
Executive officer
*Fenimore D Beagle, Albany
Division of public health education.
*B R Rickards, director, Albany
Division of sanitation
*Charles A Holmquist, C E, director, Albany
Division of vital statistics:
*Joseph V De Porte, Ph D, director, Albany

Division of child hygiene:
*Elizabeth M. Gardiner, M. D., director, Albany.
Division of communicable diseases:
*Edward S Godfrey, M D, director, Albany
Division of tuberculosis
*Robert Plunkett, M D, director, Albany
Division of social hygiene
*Albert Pfeiffer, M. D, director, Albany
Division of laboratories and research:
*Augustus B Wadsworth, M D, director, Albany
Division of public health nursing:
*Mathilde S Kuhlman, R N, director, Albany
Appropriations for fiscal year ending June 30, 1928:

Personal service	$900,100 00
Maintenance and operation	433,720 00
For State aid to county laboratories	100,000.00
Construction of addition to laboratories and repairs	575,000 00
Investigation of oyster beds	5,000.00
State aid to county health activities	59,387 98
Physically handicapped children	20,000 00
Total	2,193,207 98

Other sources of revenue
Fees from certified transcript of birth, death, and marriage certificates, $1,561 per annum
Licensing laboratories, $379.
Sale of serums, $3,035
Publications issued by health department:
Weekly Health News
Monthly Vital Statistics Review.

NORTH CAROLINA

Board of health
J Howell Way, M D, president, Waynesville
Richard H Lewis, M. D, LL D, Raleigh
Thomas E Anderson, M D, Statesville
A. J Crowell, M D, Charlotte
W S. Rankin, M D., Charlotte
E J Tucker, D D S, Roxboro.
Cyrus Thompson, M D., Jacksonville.
D A Stanton, M D, High Point.
James P Stowe, Ph G, Charlotte.
Executive health officer
Charles O'H Laughinghouse, M. D., secretary-treasurer and State health officer, Raleigh
Bureau of medical inspection of schools.
*G M Cooper, M. D, director, Raleigh
Laboratory of hygiene.
*C A Shore, M D, director, Raleigh.
Deputy State registrar.
*F M Register, M D, Raleigh
Bureau of engineering and inspection.
*H E. Miller, C E., director, Raleigh.
Bureau of maternity and infancy and malaria control.
*H A Taylor, M D., director, Raleigh.
Bureau of health education:
*M L Townsend, M. D., director, Raleigh
Bureau of county health work:
*C. N Sisk, M. D., director, Raleigh.

Appropriations for fiscal year ending June 30, 1927:

Administration	$16,540 34
Vital statistics	20,000 00
Laboratory of hygiene	70,000 00
School inspection	60,000 00
County health work	97,120 00
Epidemiology	8,500.00
Maternity and infancy	22,259.66
Engineering and inspection	68,150 00
Health education	20,400 00
Malaria control and survey	17,030 00
Total	400,000 00

Other sources of revenue

International health board	12,100 00
Federal Government	31,259 66
Fees paid the laboratory	28,300 00

Publications issued by health department
Monthly bulletin The Health Bulletin.
Special bulletins.
Biennial report.
Constructive Medicine, a monthly bulletin issued only to physicians

NORTH DAKOTA

Advisory health council
Minnie J Neilson, superintendent public instruction, ex officio, Bismarck
J Grassick, M D, president North Dakota Tuberculosis Association, ex officio, Grand Forks
Arne Oftedal, M D, Fargo
Fannie Dunn Quain, M D, Bismarck.
R S Towne, D D S, Bismarck
Executive health officer:
*A. A Whittemore M D, State health officer, Bismarck
Child hygiene and public health nursing
*Maysil M Williams, M D, director, Bismarck
Bureau of venereal diseases
*F. R Smyth, acting assistant surgeon, U S P. H S, director, Bismarck
Appropriations for biennial period ending June 30, 1925

Salaries—	
State health officer, per year	$3,600
Clerical assistants, per year	6,200
Maintenance	4,575
Maternity and child hygiene, per year	1,500
Appropriation for venereal disease work, per year	4,200

OHIO

Public health council
John E Monger, M D, chairman, Columbus
James E. Bauman, secretary
G D Lummis, M D.
C O Probst, M. D.
F. C Croxton.
R M Calfee
Executive health officer:
*John E Monger M. D., director of health, Columbus
Assistant director of health.
*James E. Bauman.

Division of administration
- *James E Bauman, chief
- *C A Orrison, chief clerk
- Bureau of publicity—
  - *Paul Mason, director.
- Bureau of local health organization—
  - *E R Shaffer, M D, chief

Division of communicable diseases
- *C P Robbins, M D, chief
- *T W Mahoney, M D, chief epidemiologist
- Bureau of venereal diseases—
  - *C P Robbins, M D, chief
- Bureau of trachoma clinics—
  - *R B Tate, M D, chief

Division of sanitary engineering
- *F H Waring, chief
- Bureau of plumbing inspection—
  - *A A Manchester, chief

Division of laboratories
- *Fred Berry, chief

Division of vital statistics
- *Irvin C Plummer, chief

Division of hygiene
- *J A Frank, M D, chief
- Bureau of tuberculosis—
  - *J A Frank, M D, chief
- Bureau of hospitals—
  - *James A Weis, chief

Division of child hygiene
- *H E Kleinschmidt, M D, chief
- Bureau of public health education—
  - *——— ———

Division of public health nursing
- *Zoe McCaleb, R N, chief

Division of industrial hygiene
- *Daniel J Kindel M D, chief
- E R Hayhurst, M D, consultant

Appropriations for biennium ending June 30, 1927

Personal service	$371,480
Maintenance	271,002
State aid for health districts	500,000
Total	1,142,482

Publications issued by health department
- Public Health Journal (quarterly), Ohio Health News (semimonthly)

OKLAHOMA

Executive health officer
- *Carl Puckett, M D, State health commissioner, Oklahoma.

Assistant State health commissioner
- *J P Folan, Oklahoma

Bureau of vital statistics
- *W B Dennis, registrar, Oklahoma

Bureau of laboratories
- *H C Ricks, M D, director of laboratory

Bureau of maternity and infancy
- *Lucille Spire Blachly, M D., director

Bureau of venereal disease control
- *J C Mahr, M D, director

Bureau of rural sanitation
- *D T Bowden, M D, director.

Bureau of sanitary engineering
- *H J. Darcey, director

Bureau of public health education
- *G Harrison, director

Appropriations for fiscal year ending June 30, 1926:

State health commissioner	$3,600 00
Assistant State health commissioner	2,400 00
Secretary and stenographer	1,800 00
Bookkeeper	2,000 00
Stenographer	1,800 00
Stenographer	1,500 00
Stenographer	1,200 00
Director of publicity	2,400 00
Stenographer	1,500 00
State chemist	3,000 00
Assistant State chemist	2,400 00
Bacteriologist	3,000 00
Assistant bacteriologist	2,400 00
Record clerk	1,800 00
Extra help (manufacture of typhoid vaccine), janitor	2,500 00
Sanitary engineer	3,000 00
Four inspectors at $1,800 each	7,200 00
State registrar of vital statistics	2,400 00
Assistant State registrar of vital statistics	1,800 00
Three statistical clerks at $1,500 each	4,500 00
Director of maternity and infancy bureau	3,000 00
Stenographer	1,500 00
Head nurse (public health)	2,400 00
Four public health nurses at $1,800 each	7,200 00
Wages—extra help	1,200 00
Contingent and aid to counties	3,379 48
Contractual services (all bureaus)	
Motor vehicles (repairs)	250 00
Traveling	12,000 00
Transportation	300 00
Communication	1,500 00
Printing	2,500 00
Other expenses	250 00
Forage supplies	100 00
Medical supplies (all departments)	5,000 00
Office supplies	1,200 00
Laundry and cleaning	100 00
Refrigerator supplies	100 00
Motor vehicle supplies	225 00
Wearing apparel	100 00
Office equipment	1,200 00
Medical laboratory equipment	500 00
Books and periodicals	100 00
Epidemiological fund (general disease prevention and control under direction of commissioner of health)	5,000 00
Control of venereal disease	7,000 00
Contingent fund—rural sanitation	21,575 00
Total	129,879 48

OREGON

Board of health
- W T Phy, M D, president, Hot Lake
- W B Morse, M. D, vice president, Salem
- Frederick D Stricker, M D, secretary and State health officer, Portland
- C M Barbee, M D, Portland
- J H Rosenberg, M D, Prineville
- C J Smith, M D, Portland
- E B Pickel, M. D., Medford

Executive health officer
*Frederick D. Stricker, M D, Secretary and State health officer, Portland
Registrar of vital statistics
*Frederick D Stricker, M D, Portland
Division of child hygiene and public health nursing
*Mrs Glendora Blakely, R N, Portland
Director laboratory
*William Levin, D P H, Portland
Appropriations for fiscal year ending December 31, 1926, $42,500
Publications issued by health department
Annual report
Biennial report.
Pamphlets and posters
Weekly letter

PENNSYLVANIA

Department of health·
Advisory board—
Edgar M Green, M D., Easton
A A. Cairns, M. D, City Hall, Philadelphia.
Samuel R Haythorn, M D, Pittsburgh
Howard C. Frontz, M D., Huntington
Louis Taylor, M D, Wilkes-Barre
Charles F Mebus, C E, Philadelphia
Executive health officer—
*Charles H. Miner, M. D, secretary of health, Harrisburg
*William G Turnbull, M D, deputy secretary of health, Harrisburg
Bureau of communicable diseases—
*J Moore Campbell, M D, Harrisburg
Division of epidemiology—
*J Moore Campbell, M D, Harrisburg
Division of tuberculosis clinics—
*Edgar T Shields, M D, Harrisburg.
Division of genitourinary clinics—
*Edgar S Everhart, M D, Lemoyne.
Division of restaurant hygiene—
*Howard M Haines, acting chief, Harrisburg
Bureau of vital statistics—
*Russell B Tewksbury, M D (acting), Harrisburg
Bureau of engineering—
*W L Stevenson, chief engineer, Harrisburg
Division of sanitary engineering—
*H E Moses, Harrisburg
Division of housing—
*H F. Bronson, Harrisburg.
Division of milk control—
*Ralph E Irwin, Camp Hill.
Bureau of tuberculosis sanatoria—
Mont Alto Sanatorium—
*Royal H McCutcheon, M. D., Mont Alto.
Cresson Sanatorium—
*Thomas H A Stites, M. D, Cresson.
Hamburg Sanatorium—
*Henry A Gorman, M D., Hamburg.
Bureau of child health—
*J Bruce McCreary, M. D., chief, Shippensburg.

Department of health—Continued
Bureau of child health—Continued
Preschool division—
*Mary Riggs Noble, M D, Harrisburg
School division—
*J Bruce McCreary, M D, Shippensburg
Dental division—
*C J Hollister, D D S., Harrisburg.
Bureau of finance—
*Clinton T Williams, Harrisburg
Bureau of accounts—
*Clinton T Williams, Harrisburg
Bureau of purchases—
*Charles H Clappier, jr, Harrisburg
Bureau of supplies—
*Roy Miller, Harrisburg.
Bureau of laboratories—
*John L Laird, M D, Philadelphia
Bureau of nursing—
*Alice M O'Halloran, R N, Harrisburg.
Bureau of drug control—
*James M. Lightner, Lancaster
Appropriations for biennial period ending June 1, 1927:

General health purposes	$4,520,000
Construction of crippled children's hospital	250,000
Sanitary water board	100,000
Total	4,870,000

PHILIPPINE ISLANDS

Director of health
Jacobo Fajardo, M D, Manila
Assistant director of health

Council of hygiene, advisory board to the director of health
Fernando Calderon, M D, president, Manila
Regino G Padua, M D, secretary, Manila.
Jose Fabella, M D, Manila
Gervasio Ocampo, M D, Manila
José Albert, M D, Manila
Benito Valdes, M D, Manila
Eulogio P Revilla, LL B, Manila
Tomas Earnshaw, Manila
Executive officer
*José P Bantug, M D, Manila
Assistant to the director
*Regino G Padua, M D, Manila
Office of records and finance
*Mamerto Tianco, chief, Manila
Office of property·
*Bonifacio Moncias, M D, acting chief, Manila
Office of vital statistics·
*Jose Guidoté, M D, chief, Manila
Office of general inspection
*Rafael Villafranca, M. D, chief, Manila.
Public health nursing
*Rosario Pastor, M D, chief, Manila
Office of sanitary engineering
*Manuel Mañosa, C. E., chief, Manila.
Division of communicable diseases:
*Leoncio Lopez Rizal, M D., chief, Manila.

Division of metropolitan sanitation:
*Eugenio Hernando, M D, chief, Manila
Division of hospitals, dispensaries, and laboratories
*Eusebio D Aguilar, M D, chief, Manila
Culion Leper Colony
*Sulpicio Chiyuto, M D, chief, Culion
Division of provincial sanitation
*Gabriel Intergan, M D, chief, Manila
Appropriations for fiscal year ending Dec 31, 1923

Salaries and wages	$444,119
Miscellaneous expenses	829,000
Furniture and equipment	12,000
Treatment of segregated lepers	125,000
Aid to specially organized Provinces	210,360
School of nursing in Baguio	3,600
Medicines, medical and surgical supplies, to be distributed among the dispensaries of the public schools	2,500
Malaria control and model rural sanitation	12,500
Total	1,639,619

Publications issued by the Philippine health service
Daily Service News.
Monthly bulletin
Annual report
Occasional pamphlets.

PORTO RICO

Insular board of health
Gustavo Muñoz Diaz, M D, president, San Juan.
José Y De Guzmán Soto, M D., secretary, San Juan
Angel M Pasquera, pharmacist, San Juan
W A Glines, M D, San Juan
A Martinez Alvarez, M D, San Juan
José López Ocosta, San Juan
G A Ramirez de Arellano, San Juan.
M Roses Artau, M. D, San Juan
Executive health officer:
*Pedro N. Ortiz M. D commissioner of health, San Juan
*A Fernós Isern, M D, assistant commissioner of health, San Juan
Division of property and accounts
*Abelardo Santiago, chief, San Juan
Division of sanitary engineering
*Octavio Marcano, sanitary engineer, San Juan
Bacteriological laboratory
*Pablo Morales Otero, M. D., director, San Juan
Chemical laboratory
*R del Valle Sárraga, chemist, director, San Juan
Division of transmissible diseases
*M O de la Rosa, M D, chief, San Juan.
Bureau of statistics.
*Manuel A Perez, chief, San Juan
Appropriations for each of the fiscal years ending June 30, 1926, and June 30, 1927

Office of the commissioner of health	$279,938 00
Leper hospital	36,790 75
Quarantine hospital	12,684 00
Antituberculosis sanatorium of Porto Rico	$146,824 00
Blind asylum	41,060 00
Institute for blind children	25,080 00
Insane asylum	116,435 00
Education and maintenance of poor deaf and dumb children	1,200 00
Care of tuberculosis patients in the sanatorium at Ponce under the control of the department of health	15,000 00
Control and prevention of tuberculosis	75,000 00
Control and prevention of veneral diseases	12,000 00
Prevention of infantile mortality	50,000 00
Extermination of mosquitoes and control and suppression of malaria	50,000 00
Suppression of anemia	150,000 00
Extermination of rats	20,000 00
Control and suppression of infantile tetanus and ophthalmia neonatorum	2,000 00
Emergency fund for the control and suppression of epidemics	10,000 00
Girls' charity school	86,776 00
Boys' charity school	114,187 00
Sanitation fund, trust fund	153,088.22
Total	1,398,032 97

RHODE ISLAND

Board of health.
William F. Williams, M D, president, Bristol
Joseph M. Bennett, M. D., vice president, Providence
Thomas J McLaughlin, M D, Woonsocket.
Alexander B Briggs, M D, Ashaway
Berton W Storrs, M D, Portsmouth.
M S Budlong, M D., Providence
Executive health officer
*B U. Richards, M D., secretary State board of health and State registrar, statehouse, Providence
Pathologist
Lester A. Round, Ph. D, Providence.
Chemist
Stephen De M Gage, Providence
Appropriations for fiscal year ending Nov 30, 1926:

Executive department	$30,000
Chemical laboratory	18,000
Pathological laboratory	20,000
Child welfare	10,000
Venereal diseases	10,000
Total	88,000

SOUTH CAROLINA

Executive committee, board of health
Robert Wilson, jr, M D, chairman, Charleston
L D Boone, M D, Langley
Davis Furman, M D, Greenville
E A Hines, M D, Seneca
W R Wallace, M D, Chester.
Wm Egleston, M D., Hartsville
G C Propst, Ph G, Sumter

Executive committee, board of health—Continued.
W M Lester, M D, Columbia
Jno M Daniel, Atty Gen, Columbia
A J Beattie, Compt Gen, Columbia
Executive health officer
*James A Hayne, M D, State health officer, Columbia
Department of county health units
*Ben F Wyman, M D, Columbia
Bureau of child hygiene
*Miss Ada Taylor Graham, R N, supervisor of public health nursing, Columbia
Laboratory department
*H M Smith, M D, in charge, Columbia.
*J R Cain, chief bacteriologist, Columbia
Bureau of vital statistics
*C W Miller, Columbia
Bacteriologist and chemist
F L Parker, jr, M D, Ph D, Columbia
South Carolina Sanitorium
*Ernest Cooper, M D, superintendent, Columbia
Epidemiologist
*A H Hayden, M D, Columbia.
Sanitary engineer·
*A E Legare, C E, Columbia.
State hotel inspector.
Paul H Leonard, Columbia
Appropriations for fiscal year ending Dec 31, 1925·

Administrative office	$56,284 30
Bureau of child hygiene	16,492 00
Bureau of vital statistics	7,625 00
Laboratory	11,830 00
Bureau of rural sanitation	26,322 94
Malaria cooperative work	16,245 00
Tuberculosis sanatoria	93,600 00
Hotel inspection	5,240 00
Aid for crippled children	10,000 00
Total	243,639 24

Publications issued by health department
Annual report
Bulletins of various departments.

SOUTH DAKOTA

Board of health
R D Alway, M D, president, Aberdeen
H R Kenaston, M D, vice president, Bonesteel
Albert C Clark, M D, Woonsocket
F E Clough, M D, Lead
J F. D Cook, M D, superintendent, Waubay
Executive health officer
*J F. D Cook, M D, superintendent and executive officer, Waubay
Division of vital statistics·
*J. F D Cook, M. D, Waubay
Division of preventable diseases
*J F D. Cook, M. D, director.
Division of epidemiology·
*D R Jones, M D., director
Division of child hygiene.
*Clara Edna Hayes, M D, director.
*Miss Edith Olson, R N, supervisor of public health nursing
Division of sanitary engineering
*A H Wieters, director
Division of education and publicity:
M C. Haecker, director.
Division of medical licensure
H R Kenaston, M D, director.
Division of records and accounts
*Esther A. Larson, director
State laboratories at Vermilion
*J C Ohlmacher, M D, director
Appropriations available July 1, 1925

	1925–26	1926–27
Salary, superintendent board of health	$3,200	$3,200
Biological products	2,500	2,500
Sheppard-Towner maternity and infancy act	10,000	10,000
Salaries and wages	19,000	19,000
Other compensations	1,500	1,500
Supplies and materials	2,500	2,500
Communication and travel	4,000	4,000
Subsistence, care, and support	500	500
Printing, binding, advertising	3,500	3,500
Light and power	250	250
Repairs and replacements	1,500	1,500
Rents	1,560	1,560
Dues	50	50
Crippled children	4,000	4,000
Total	54,060	54,060

TENNESSEE

Department of public health
*E L Bishop, M D, C P. H, commissioner, Nashville
Division of epidemiology
* E A Lane, M D, C P H, director, Nashville
Division of local organization
* W. K Sharp, jr., M D, director, Nashville.
Division of vital statistics
* J B Bond, M D, director, Nashville
Division of laboratories
* William Litterer, M D, director, Nashville.
Division of sanitary engineering
* Howard R Fullerton, C E, director, Nashville
Division of health education
* A F Richards, M D, director, Nashville
Division of child hygiene and public health nursing:
* W J Breeding, M D., director, Nashville
*Miss M G Nisbet R N, State supervising nurse, Nashville
Appropriations for the biennial period ending June 30, 1927

Administration	$21,000 00
Sera, vaccines, and medical supplies	6,000 00
Epidemic fund	5,000 00
Trachoma fund	4,000 00
Vital statistics fund	25,060 00
Sanitary engineering fund	30,200 00
Laboratory fund	40,040 00
Epidemiology and local organization fund (former rural sanitation fund)	60,500 00
Child hygiene and public health nursing fund (former maternity and child welfare fund)	42,435 10
Health education fund	10,600 00
Venereal disease control fund (unexpended balance)	2,772 49
Total	247,607 59

Other sources of revenue
United States Department of Labor, maternity and child welfare, $25,000
International Health Board, $22 500 (variable)
United States Public Health Service, venereal disease control, $552 90
International Health Board, cooperation in malaria control, epidemiology and local organization, vital statistics United States Public Health Service in malaria control Individual counties and cities in State cooperation in malaria control, county health work and child hygiene and public health nursing United States Public Health Service, cooperation in county health work, $7,000

TEXAS

Board of health
H O Sappington, M D , president, Austin
R. W Noble, M D , Temple.
Phil Russell, D O , Fort Worth
A. H. Braden, M D , Houston.
E L. Lawrence, M D , Rhorndale
Joe R Frobese, M D , San Antonio
Ralph Bailey, M. D , Gatesville
Executive health officer
*H O Sappington, M. D , State health officer, Austin
Division of child hygiene
H N Barnett, M D , director
Division of communicable diseases
Livingstone Anderson, M D , epidemiologist
Division of vital statistics
C. E Durham, M D , director.
Food and drug division
E H Golaz, director
Sanitary engineering division·
V M Ehlers, C E , chief sanitary engineer
Appropriations for fiscal year ending Aug 31, 1927·

General fund	$139,640 52
Special fund	36,450 52
Total	176,091 04

UTAH

Board of health·
Fred Stauffer, M D , president, Salt Lake City
T B Beatty, M D , secretary, Salt Lake City
Joseph R Morrell, M D , Ogden
Mrs Valeria B Young, Salt Lake City
Carl Hopkins, Ogden
S S Burnham, D D S , Salt Lake City.
Chas J Ullrich, C E , Salt Lake City.
Executive health officer
*T B Beatty, M D , State health commissioner, Salt Lake City
Bureau of vital statistics
*T B Beatty, M D , State registrar
*Anna M Bowen, deputy registrar
Bureau of child hygiene
*H Y Richards, M D., director.
Epidemiologist.
*——— ———.
Sanitary engineer·
*Leonard H Male
Bacteriological laboratory
*E H Bramhall, bacteriologist.
Appropriations for biennial period ending Mar. 31, 1927

Salaries	$33,960
Office expense	8,000
Travel	3,500
Equipment	1,000
Child hygiene	13,000
Total	59,460

Publications issued by health department·
Quarterly bulletin
Biennial report
Fiscal year ends March 31

VERMONT

Board of health
Edward J Rogers, M D , chairman, Pittsford.
William G. Ricker, M D , St Johnsbury.
John P Gifford, M D , Randolph
Executive health officer
*Charles F Dalton, M D., secretary State board of health, Burlington.
Laboratory of hygiene
*Charles F Whitney, M D , director, Burlington
Sanitary engineering.
J W Votey, C E , Burlington.
Sanitary inspecting
*Fred S Kent, M D , Burlington.
Division of communicable diseases.
*Fred S Kent, M D., Burlington.
Division of tuberculosis
*H. W Slocum, Burlington.
Division of poliomyelitis
*W. L Aycock, M D., research, Burlington.
*Bertha E Weisbrod, R N , Burlington
Division of maternal and infant hygiene·
*Harriet M Gardner, R N , field nurse, St. Johnsbury
Appropriations for fiscal year ending June 30, 1924
Total budget, $40,000
Other sources of revenue
Private donations for study and treatment of infantile paralysis
Sheppard-Towner funds from Federal Government
Publications issued by health department.
Biennial report.

VIRGINIA

Board of health:
W T. Graham, M D , acting president, Richmond.
Mrs. W M Smith, Berryville
Frank Darling, Hampton
J A McGuire, M D., Norton.
Guy R Harrison, D D S , Richmond.
George B Lawson, M D , Roanoke
L T Royster, M D , Charlottesville
Executive health officer
*Ennion G Williams, M. D , State health commissioner, Richmond.
Assistant health commissioner and director of rural health work
*Roy K Flannagan, M. D , Richmond
Registrar of vital statistics.
*W A Plecker, M D , Richmond

Bacteriologist
*A H Straus, Richmond.
Sanitary engineer
Richard Messer, C E, Richmond.
Director cooperative sanitation
*L L Williams, Jr, Surgeon, U S P H S
Bureau of child welfare
*Mary E. Brydon, M D, Richmond.
Director public health nursing
*Nannie J Minor, R N, Richmond
Director mouth hygiene
*N Talley Ballou, D D S, Richmond
Director tuberculosis education
*Agnes D Randolph, R N, Richmond
Epidemiologist
*H G Grant, M D, Richmond
Director social hygiene education
*Mrs F B Croxton, R N, Richmond
Appropriations for fiscal year ending June 30, 1927

Administration	$22,640
Sanitary engineering	17,570
Publicity	5,600
Rural health work	40,000
Malaria	5,000
Inspection of convict camps	3,000
Laboratory	19,900
Child welfare and public health nursing	50,000
Bureau of social hygiene	7,000
Control of epidemics	5,000
Vital statistics	22,495
Collection and publication of marriage and divorce statistics	3,076
Prevention of blindness	2,300
Tuberculosis education	23,350
Total	226,331

Publications issued by health department
Monthly bulletin
Biennial report

WASHINGTON

Board of health
A E Stuht, M D, director of health, chairman.
W W Brand, M D
James H Egan, M D
R E Elvins, M D
Herbert C Lieser, M D
H W Nightingale, secretary, Seattle.
Executive health officer.
*A. E. Stuht, M D, State director of health, Seattle.
Epidemiologist:
*A. U. Simpson, M D, Seattle
Chief of laboratory.
*A U Simpson, M. D, Seattle
Sanitary engineer.
*H W. Nightingale, C. E., Seattle.
Registrar
*H W Nightingale, C E, Seattle.
Division of child hygiene.
*A E Stuht, M D, chief
*Ella S. Erikson, advisory nurse.
Appropriation for one year ending Mar 31, 1927

Operations	$40,000
Division of child hygiene—	
State	5,000
Federal	10,000
Tuberculosis hospitals (State aid to local sanatoria)	100,000

WEST VIRGINIA

Public health council
H G Camper, M D, president, Welch
W M Babb, M D, Keyser
J L Pyle, M D, Chester
O H Jennings, M D, Williamson
H A Barbee, M D, Point Pleasant
Benj O Robinson, M D, Parkersburg
W T Henshaw, M D, commissioner of health, Charleston
Executive health officer
*W T Henshaw, M D, commissioner of health, Charleston
Division of sanitary engineering·
*Ellis S Tisdale, chief engineer, Charleston.
*John B. Harrington, assistant engineer, Charleston
*Daniel W. Evans, assistant engineer, Charleston
Division of vital statistics·
*Carl F Raver, M. D, M. P H., director, Charleston.
Division of child welfare and public health nursing·
*Jean T. Dillon, R. N., director, Charleston.
*Edna M Hardsaw, R N, field advisory nurse, Charleston
*Helen E. Bond, R N, field advisory nurse, Charleston
Hygienic laboratory
*Chas E. Gabel, Ph D, director, Charleston.
*Lucy F Gabel, chemist, Charleston
*Catherine V Offutt, technician, Charleston.
Division of preventable diseases
*David Littlejohn, M D, director, Charleston
Bureau of venereal diseases
*David Littlejohn, M D, acting director, Charleston
*Ada L Coddington, associate director, Charleston
Bureau of rural sanitation
*J G Townsend, M. D, surgeon, U S P. H S. director, Charleston
Division of public health education.
*Medora M. Mason, director, Charleston.
Appropriations for fiscal year ending June 30, 1926

For general use	$100,000
Salary of commissioner	4,800
State Sheppard-Towner	5,000
Total	109,800

Other sources of revenue
Fees for granting certificates to practice medicine.
Fees from laboratory work for private individuals

Expense of cooperative work with the Federal Government Sheppard-Towner Act relating to maternal and infant hygiene, $10,000
Publications issued by health department
Quarterly bulletin
Annual report

WISCONSIN

Board of health
Otho Fiedler, M D, president, Sheboygan
Joseph Dean, M D, vice president, Madison
L A Steffen, M D, Antigo
J J Seelman, M D, Milwaukee
G Windesheim, M D, Kenosha
Mina B Glasier, M D, Bloomington
C A Harper, M D, health officer, Madison
*L W Hutchcroft, assistant State health officer, Madison
Executive health officer
*C A Harper, M D, State health officer, Madison
Deputy State health officers
*G W Henika, M D, Madison
*George E Hoyt, M D, Milwaukee
*H B Sears, M D, Oshkosh
*V A Gudex, M D, Eau Claire
*A E deNeveu M D, Rhinelander
Bureau of vital statistics
*C A Harper, M D, State registrar, Madison
Bureau of communicable diseases
*F F Bowman, M. D, epidemiologist, Madison.
*H. M Guilford, M D, director, Madison
Bureau of sanitary engineering
*C M Baker, State sanitary engineer, Madison
*L F Warrick, assistant sanitary engineer, stream pollution, Madison
*O J Muegge, assistant sanitary engineer, Madison
*E J Tully, chemical engineer, Madison
Bureau of education
*L W Bridgman, acting director, Madison
Bureau of child welfare
*Cora S Allen, M D, director, Madison
*Sylvia G Stuessy, M D, child health physician, Madison
*Charlotte Calvert, M D, child health physician, Madison.
*Mrs Gertrude S Hasbrouck, organizer of infant hygiene classes, Madison
Bureau of public health nursing:
*Cecilia A Evans, R N, director, Madison
*Marie U. Puls, R N, field advisory nurse, Madison.
Bureau of nursing education.
*Adda Eldredge, R N, director, Madison
Bureau of plumbing and domestic sanitary engineering
*Frank R King, State domestic sanitary engineer, Madison.
Bureau of social hygiene:
*H M Guilford, M D, director, Madison.
*Aimeé Zillmer, lecturer, Madison.
Laboratory service
*W D Stovall, M D, director, State laboratories, Madison
*M S Nichols, chemist, State laboratory, Madison
*Etta Spence, director branch laboratory, Rhinelander
*Elizabeth Brown, director cooperative laboratory, Superior
*A H Broche, M D, director, cooperative laboratory, Oshkosh
*Marjorie Bates, technician
*Henry Miller, director cooperative laboratory, Kenosha
*Josephine Foote, director cooperative laboratory, Wausau.
*Ralph Metcalf, director cooperative laboratory, Beloit
*Clarissa McFetridge, director, cooperative laboratory, Green Bay
Appropriations for fiscal year ending June 30, 1926

General administration	$51,000
Emergency appropriation for epidemics	7,500
Branch laboratory and State cooperative laboratories	9,000
Prevention of infantile blindness	1,000
Venereal disease control work	36,370
Bureau of sanitary engineering	14,000
Bureau of communicable diseases	13,300
Bureau of child welfare and public health nursing	23,000
Comfort station supervision	5,000
Licensing of embalmers, hotels and restaurants, plumbers, beauty parlors, nurses, and barbers	57,650
Total	217,820

Publications issued by health department
Quarterly bulletin
Biennial report

WYOMING

Board of health
C Y Beard, M D, president, Cheyenne
R. W Hale, M D, vice president, Thermopolis.
G M. Anderson, M D, secretary and executive officer, Cheyenne
Earl E Whedon, M D, Sheridan.
Edward S Lauzer, M D, Rock Springs
Executive health officer.
*G. M Anderson, M D., State health officer, Cheyenne
Appropriations for biennial period ending Mar 31, 1927:

State board of health	$10,000
Salary of secretary	8,000
Salary board members	500
Bureau of maternity and infant hygiene	3,200
Total	21,700

Publications issued by health department.
Biennial report
Bimonthly bulletin

EXAMINATIONS FOR ENTRANCE INTO THE REGULAR CORPS OF THE PUBLIC HEALTH SERVICE

Examinations of candidates for entrance into the Regular Corps of the United States Public Health Service will be held at the following-named places on the dates specified

Washington, D. C.	Oct 4, 1926.
Chicago, Ill.	Oct 4, 1926.
New Orleans, La.	Oct 4, 1926.
San Francisco, Calif.	Oct 4, 1926.

Candidates must be not less than 23 nor more than 32 years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written, and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate

Requests for information or permission to take this examination should be addressed to the Surgeon General United States Public Health Service, Washington, D. C.

DEATHS DURING WEEK ENDED AUGUST 14, 1926

Summary of information received by telegraph from industrial insurance companies for week ended August 14, 1926, and corresponding week of 1925 (From the Weekly Health Index, August 18, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Aug 14, 1926	Corresponding week, 1925
Policies in force	65, 073, 227	60, 761, 269
Number of death claims	10, 561	9, 806
Death claims per 1,000 policies in force, annual rate	8 5	8. 4

Deaths from all causes in certain large cities of the United States during the week ended August 14, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, August 18, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Aug 14, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Aug 14, 1926[2]
	Total deaths	Death rate[1]		Week ended Aug 14, 1926	Corresponding week, 1925	
Total (65 cities)	5, 888	10 7	11 4	780	906	[3] 62
Akron	29			4	7	43
Albany [4]	18	7 9	12 8	4	5	84
Atlanta	81			10	23	
White	28			4		
Colored	53	([5])		6		
Baltimore [4]	186	12 0	12 0	41	37	120
White	145			26		93
Colored	41	([5])		15		243

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births Cities left blank are not in the registration area for births.

[3] Data for 63 cities

[4] Deaths for week ended Friday, Aug 13, 1926.

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Kansas City, Kans., 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D C , 25

Deaths from all causes in certain large cities of the United States during the week ended August 14, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, August 18, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Aug 14, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Aug 14, 1926
	Total deaths	Death rate		Week ended Aug 14, 1926	Corresponding week, 1925	
Birmingham	75	18.5	11.9	10	7	
White	34			6		
Colored	41	(5)		4		
Boston	181	12.0	13.0	36	23	101
Bridgeport	29			7	4	119
Buffalo	112	10.7	12.3	13	19	54
Cambridge	21	9.0	5.2	3	2	50
Camden	33	13.1	12.2	7	7	118
Canton	22	10.4	9.3	5	1	111
Chicago [4]	497	8.5	10.4	61	87	54
Cincinnati	137	17.4	16.7	19	19	118
Cleveland	173	9.4	9.8	25	20	65
Columbus	68	12.4	13.2	4	13	37
Dallas	55	14.3	12.9	11	7	
White	37			8		
Colored	18	(5)		3		
Dayton	33	9.7	12.4	0	3	0
Denver	70	12.8	14.5	6	10	
Des Moines	19	6.8	8.5	2	6	33
Detroit	261	10.5	9.4	38	40	61
Duluth	21	9.7	9.4	0	2	0
El Paso	23	11.0	10.9	6	6	
Erie	16			4	2	76
Fall River [4]	21	8.4	6.9	6	4	87
Flint	20	7.6	10.0	3	5	50
Fort Worth	24	7.9	7.2	2	1	
White	18			2		
Colored	6	(5)		0		
Grand Rapids	32	10.7	9.5	3	3	43
Houston	50			5	4	
White	33			3		
Colored	17	(5)		2		
Indianapolis	93	13.2	12.8	19	14	139
White	78			17		144
Colored	15	(5)		2		110
Jersey City	52	8.5	11.1	8	10	57
Kansas City, Kans	28	12.5	10.3	4	2	69
White	21			3		63
Colored	7	(5)		1		131
Kansas City, Mo	99	13.8	14.3	12	17	
Los Angeles	190			17	19	47
Louisville	63	10.6	16.6	13	20	112
White	50			10		100
Colored	13	(5)		3		188
Lowell	20			4	7	74
Lynn	8	4.0	10.6	0	2	0
Memphis	78	23.0	12.0	10	8	
White	41			6		
Colored	37	(5)		4		
Milwaukee	80	8.1	8.9	10	17	46
Minneapolis	75	9.0	9.3	8	5	45
Nashville [4]	49	18.6	22.2	13	17	
New Bedford	24			2	6	35
New Orleans	143	17.8	21.5	19	29	
White	84			9		
Colored	59	(5)		10		
New York	1,107	9.7	10.2	137	159	55
Bronx Borough	139	8.1	8.4	9	12	30
Brooklyn Borough	367	8.5	8.8	56	55	57
Manhattan Borough	461	12.8	12.8	52	63	57
Queens Borough	111	7.6	8.8	19	23	86
Richmond Borough	29	10.6	15.1	1	6	18
Newark, N J	82	9.3	10.0	9	16	43
Norfolk	33	9.9	12.0	5	8	93
White	14			3		89
Colored	19	(5)		2		99
Oakland	55	11.0	9.2	3	3	35
Oklahoma City	23			2	2	
Omaha	40	9.7	11.3	3	6	31
Paterson	30	10.9	11.0	4	5	79

For footnotes see p 1846.

Deaths from all causes in certain large cities of the United States during the week ended August 14, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, August 18, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Aug. 14, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Aug. 14, 1926
	Total deaths	Death rate		Week ended Aug. 14, 1926	Corresponding week, 1925	
Philadelphia	381	9.9	11.7	53	78	70
Pittsburgh	130	10.6	13.0	16	21	53
Portland, Oreg.	75			2	4	20
Providence	50	9.5	10.3	9	5	75
Richmond	55	15.2	19.0	10	16	126
White	32			8		157
Colored	23	(5)		2		70
Rochester	63	10.2	10.9	9	13	72
St. Louis	218	13.7	18.3	22	17	
St. Paul	44	9.3	9.1	0	3	0
Salt Lake City [4]	25	9.8	11.1	6	4	83
San Antonio	40	10.2	12.6	8	14	
San Diego	38	18.0	10.8	4	2	84
San Francisco	108	9.9	11.9	6	8	36
Schenectady	9	5.0	7.9	1	1	29
Seattle	59			3	3	28
Somerville	22	11.5	2.6	3	1	78
Spokane	26	12.4	10.5	1	1	23
Springfield, Mass.	19	6.8	9.9	2	3	29
Syracuse	43	12.2	10.6	5	3	63
Tacoma	24	11.8	7.5	3	1	70
Toledo	59	10.5	8.3	4	7	39
Trenton	31	12.1	13.0	0	5	0
Utica	20	10.1	11.3	1	5	22
Washington, D. C.	139	13.7	11.2	13	16	74
White	77			7		58
Colored	62	(5)		6		109
Waterbury	14			2	6	43
Wilmington, Del.	24	10.1	9.4	3	7	70
Worcester	49	13.2	10.9	5	6	58
Yonkers	16	7.2	8.3	4	3	90
Youngstown	38	12.0	10.4	10	7	127

For footnotes see p. 1846.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended August 21, 1926

ALABAMA

	Cases
Chicken pox	8
Diphtheria	13
Influenza	8
Lethargic encephalitis	1
Malaria	116
Measles	24
Mumps	5
Pellagra	16
Pneumonia	16
Poliomyelitis	1
Scarlet fever	8
Smallpox	9
Tetanus	9
Tuberculosis	83
Typhoid fever	160
Typhus fever	1
Whooping cough	70

ARIZONA

	Cases
Diphtheria	2
Measles	1
Scarlet fever	4
Trachoma	2
Tuberculosis	76
Typhoid fever	1

ARKANSAS

	Cases
Chicken pox	16
Diphtheria	1
Hookworm disease	1
Influenza	41
Malaria	176
Measles	3
Mumps	5
Paratyphoid fever	5
Pellagra	30
Scarlet fever	7
Smallpox	13
Trachoma	3
Tuberculosis	19
Typhoid fever	53
Whooping cough	30

CALIFORNIA

	Cases
Cerebrospinal meningitis—Sacramento	1
Chicken pox	57
Diphtheria	46
Influenza	4
Leprosy—San Bernardino County	1
Lethargic encephalitis—Los Angeles	1
Measles	86
Mumps	51
Poliomyelitis	
Alhambra	1
Los Angeles	1
Los Angeles County	1
Pasadena	1
Sacramento County	1
San Luis Obispo	1
Santa Paula	1
Scarlet fever	47
Smallpox	4
Tuberculosis	190
Typhoid fever	21
Whooping cough	24

COLORADO

	Cases
Chicken pox	4
Diphtheria	9
Measles	4
Scarlet fever	6
Trachoma	1
Tuberculosis	27
Typhoid fever	12
Whooping cough	11

CONNECTICUT

	Cases
Cerebrospinal meningitis	1
Chicken pox	5
Diphtheria	8
German measles	3
Influenza	2
Malaria	1
Measles	13
Mumps	2
Paratyphoid fever	2

CONNECTICUT—continued

	Cases
Pneumonia (broncho)	5
Pneumonia (lobar)	11
Poliomyelitis	1
Scarlet fever	14
Septic sore throat	30
Tetanus	2
Trachoma	1
Typhoid fever	4
Tuberculosis (all forms)	30
Whooping cough	25

DELAWARE

Anthrax	1
Tuberculosis	1
Typhoid fever	1

GEORGIA

Chicken pox	3
Conjunctivitis (infectious)	1
Dengue	1
Diphtheria	12
Dysentery	15
Hookworm disease	2
Influenza	6
Malaria	101
Measles	2
Mumps	5
Paratyphoid fever	1
Pellagra	4
Pneumonia	6
Scarlet fever	1
Septic sore throat	8
Smallpox	5
Tuberculosis	13
Typhoid fever	90
Whooping cough	13

IDAHO

Chicken pox	3
Diphtheria	3
Measles	2
Smallpox	1
Typhoid fever	5
Whooping cough	2

ILLINOIS

Chicken pox	27
Diphtheria	34
Influenza	49
Lethargic encephalitis	
Cook County	1
Livingston County	1
Measles	116
Mumps	12
Pneumonia	109
Poliomyelitis	
Cook County	1
Du Page County	2
Edwards County	1
Rock Island County	1
Sangamon County	1
Vermilion County	1
Scarlet fever	65
Smallpox	3
Tuberculosis	656
Typhoid fever	53
Whooping cough	194

[1] Week ended Friday.

INDIANA

	Cases
Chicken pox	4
Diphtheria	19
Influenza	6
Measles	13
Poliomyelitis	1
Scarlet fever	26
Smallpox	9
Tuberculosis	68
Typhoid fever	28
Whooping cough	87

IOWA

Chicken pox	6
Diphtheria	10
Measles	3
Mumps	1
Pneumonia	1
Scarlet fever	21
Smallpox	2
Tuberculosis	21
Typhoid fever	7
Whooping cough	15

KANSAS

Cerebrospinal meningitis—Burrton	1
Chicken pox	3
Diphtheria	7
German measles	1
Influenza	1
Measles	15
Mumps	1
Pneumonia	2
Scarlet fever	24
Smallpox	3
Tuberculosis	20
Typhoid fever	43
Whooping cough	41

LOUISIANA

Diphtheria	20
Influenza	12
Leprosy	1
Malaria	51
Paratyphoid fever	1
Pneumonia	20
Scarlet fever	4
Smallpox	6
Tuberculosis	29
Typhoid fever	44
Whooping cough	5

MAINE

Chicken pox	6
Measles	28
Mumps	2
Pneumonia	2
Scarlet fever	27
Tetanus	1
Tuberculosis	9
Typhoid fever	2
Whooping cough	19

MARYLAND [1]

Cerebrospinal meningitis	1
Chicken pox	4
Diphtheria	8

MARYLAND—continued

	Cases
Dysentery	9
Influenza	2
Lethargic encephalitis	3
Measles	9
Mumps	5
Ophthalmia neonatorum	1
Paratyphoid fever	1
Pellagra	1
Pneumonia (broncho)	8
Pneumonia (lobar)	10
Poliomyelitis	3
Scarlet fever	6
Septic sore throat	2
Tuberculosis	74
Typhoid fever	32
Whooping cough	98

MASSACHUSETTS

	Cases
Chicken pox	26
Diphtheria	22
German measles	5
Influenza	2
Lethargic encephalitis	3
Malaria	1
Measles	31
Mumps	37
Ophthalmia neonatorum	55
Pellagra	1
Pneumonia (lobar)	23
Poliomyelitis	21
Scarlet fever	81
Septic sore throat	4
Tetanus	2
Trachoma	1
Tuberculosis (pulmonary)	96
Tuberculosis (other forms)	11
Typhoid fever	12
Whooping cough	86

MICHIGAN

	Cases
Diphtheria	82
Measles	41
Pneumonia	18
Scarlet fever	51
Smallpox	6
Tuberculosis	86
Typhoid fever	25
Whooping cough	141

MINNESOTA

	Cases
Chicken pox	3
Diphtheria	26
Influenza	3
Measles	24
Poliomyelitis	1
Scarlet fever	100
Tuberculosis	38
Typhoid fever	7
Whooping cough	40

MISSISSIPPI

	Cases
Diphtheria	8
Poliomyelitis	1
Scarlet fever	7
Typhoid fever	34

MISSOURI

	Cases
Cerebrospinal meningitis	2
Chicken pox	4
Diphtheria	24
Measles	12
Pneumonia	2
Rabies	1
Scarlet fever	28
Smallpox	3
Tetanus	1
Trachoma	1
Tuberculosis	48
Typhoid fever	53
Whooping cough	26

MONTANA

	Cases
Diphtheria	1
German measles	1
Measles	7
Scarlet fever	7
Typhoid fever	4

NEBRASKA

	Cases
Chicken pox	3
Diphtheria	3
Measles	3
Mumps	1
Pneumonia	1
Scarlet fever	22
Smallpox	6
Tuberculosis	11
Typhoid fever	4
Whooping cough	16

NEW JERSEY

	Cases
Cerebrospinal meningitis	1
Chicken pox	6
Diphtheria	41
Dysentery	3
Measles	42
Paratyphoid fever	1
Pneumonia	24
Poliomyelitis	1
Scarlet fever	26
Typhoid fever	19
Whooping cough	85

NEW MEXICO

	Cases
German measles	1
Measles	7
Mumps	2
Rabies (in animals)	3
Scarlet fever	1
Tuberculosis	36
Typhoid fever	6
Whooping cough	6

NEW YORK

(Exclusive of New York City)

	Cases
Cerebrospinal meningitis	3
Chicken pox	43
Diphtheria	34
Dysentery	2
German measles	12
Lethargic encephalitis	4
Malaria	1

NEW YORK—continued

	Cases
Measles	127
Mumps	33
Ophthalmia neonatorum	1
Paratyphoid fever	2
Pneumonia	37
Poliomyelitis	44
Scarlet fever	34
Septic sore throat	1
Smallpox	4
Tetanus	2
Trachoma	1
Typhoid fever	24
Vincent's angina	3
Whooping cough	180

NORTH CAROLINA

Cerebrospinal meningitis	1
Chicken pox	8
Diphtheria	36
German measles	2
Malaria	21
Measles	35
Poliomyelitis	1
Scarlet fever	18
Septic sore throat	3
Smallpox	11
Trachoma	3
Typhoid fever	97
Whooping cough	214

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Cerebrospinal meningitis	
Jefferson County	1
Le Flore County	1
Washita County	1
Diphtheria	12
Influenza	30
Malaria	91
Measles	8
Pellagra	12
Pneumonia	15
Smallpox	1
Typhoid fever	122
Whooping cough	26

OREGON

Cerebrospinal meningitis	1
Chicken pox	4
Diphtheria	11
Influenza	7
Malaria	1
Measles	14
Mumps	7
Pneumonia	[1] 4
Scarlet fever	23
Septic sore throat	3
Smallpox	4
Tuberculosis	4
Typhoid fever	8
Whooping cough	4

[1] Deaths.

PENNSYLVANIA

	Cases
Anthrax—Philadelphia	1
Cerebrospinal meningitis	
Bradford	1
Titusville	1
Chicken pox	46
Diphtheria	92
German measles	4
Impetigo contagiosa	3
Measles	138
Mumps	7
Ophthalmia neonatorum—Philadelphia	1
Pneumonia	17
Poliomyelitis	
Johnstown	1
Philadelphia	2
Scattering	4
Scarlet fever	83
Tetanus—Beaver Falls	1
Trachoma—Philadelphia	1
Tuberculosis	106
Typhoid fever	51
Whooping cough	390

SOUTH DAKOTA

Measles	5
Scarlet fever	6
Tuberculosis	1
Typhoid fever	2
Whooping cough	2

TENNESSEE

Diphtheria	15
Dysentery	2
Lethargic encephalitis—Obion County	1
Malaria	51
Measles	8
Ophthalmia neonatorum	1
Pellagra	5
Pneumonia	1
Poliomyelitis	
Chattanooga	1
Knoxville	1
Scarlet fever	14
Smallpox	1
Tuberculosis	35
Typhoid fever	150
Whooping cough	62

TEXAS

Chicken pox	6
Dengue	1
Diphtheria	6
Dysentery	4
Influenza	15
Measles	3
Mumps	7
Pellagra	6
Pneumonia	1
Rabies (human)	2
Scarlet fever	13
Smallpox	2
Trachoma	2
Tuberculosis	8
Typhoid fever	31
Whooping cough	29

UTAH

Disease	Cases
Chicken pox	2
Diphtheria	4
Influenza	1
Measles	7
Mumps	2
Poliomyelitis—Salt Lake City	1
Typhoid fever	4
Whooping cough	32

VERMONT

Disease	Cases
Chicken pox	2
Diphtheria	3
Measles	4
Typhoid fever	4
Whooping cough	5

WASHINGTON

Disease	Cases
Cerebrospinal meningitis	
Chelan County	1
Spokane	1
Chicken pox	15
Diphtheria	14
German measles	7
Measles	15
Mumps	5

WASHINGTON—continued

Disease	Cases
Poliomyelitis	1
Scarlet fever	21
Smallpox	16
Tuberculosis	8
Typhoid fever	26
Whooping cough	24

WEST VIRGINIA

Disease	Cases
Diphtheria	13
Influenza	4
Measles	18
Scarlet fever	13
Smallpox	5
Tuberculosis	27
Typhoid fever	16
Whooping cough	34

WYOMING

Disease	Cases
Chicken pox	1
Diphtheria	2
Measles	4
Mumps	1
Scarlet fever	3
Tuberculosis	1
Vincent's angina	1
Whooping cough	4

Reports for Week Ended August 14, 1926

DISTRICT OF COLUMBIA

Disease	Cases
Diphtheria	4
Measles	4
Pneumonia	7
Scarlet fever	2
Smallpox	2
Tuberculosis	22
Typhoid fever	3
Whooping cough	19

NORTH DAKOTA

Disease	Cases
Chicken pox	1
Diphtheria	3
German measles	1
Measles	11
Pneumonia	4
Scarlet fever	37
Smallpox	5

NORTH DAKOTA—continued

Disease	Cases
Tuberculosis	5
Typhoid fever	1
Whooping cough	24

SOUTH CAROLINA

Disease	Cases
Chicken pox	6
Diphtheria	10
Hookworm disease	43
Influenza	58
Malaria	330
Measles	6
Paratyphoid fever	13
Pellagra	115
Scarlet fever	7
Smallpox	10
Tuberculosis	49
Typhoid fever	130
Whooping cough	47

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
April, 1926										
Pennsylvania	8	695		5	18,202	1	2	2,384	0	91
May, 1926										
Florida	2	55	9	12	327	8	0	31	260	55
June, 1926										
Florida	3	36	66	39	116	7	2	25	187	
July, 1926										
Arkansas	2	7	46	330	61	66	0	22	7	16
Colorado		42	3	2	79		0	37	6	2
New Jersey	5	221	10	1	392		5	249	2	[illegible]
New York	17	919	69	21	3,994		56	849	87	142
North Dakota		22					0	105	17	8
Tennessee		14	28	346	261	143	1	53	29	590
Vermont		14			65		5	7	0	3

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of July, 1926, to other State health departments by departments of health of certain States

Referred by—	Chicken pox	Diphtheria	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever
California					6	
Connecticut		1			1	
Illinois	1			2	8	3
Minnesota					78	1
New York		3	2	4		1

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended August 7, 1926, 38 States reported 721 cases of diphtheria. For the week ended August 8, 1925, the same States reported 870 cases of this disease. Ninety-six cities, situated in all parts of the country, and having an aggregate population of about 30,000,000, reported 455 cases of diphtheria for the week ended August 7, 1926 Last year for the corresponding week they reported 474 cases. The estimated expectancy for these cities was 540 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-six States reported 1,614 cases of measles for the week ended August 7, 1926, and 586 cases of this disease for the week ended August 8, 1925. Ninety-six cities reported 380 cases of measles for the week this year, and 285 cases last year.

Poliomyelitis.—The health officers of 38 States reported 65 cases of poliomyelitis for the week ended August 7, 1926. The same States reported 296 cases for the week ended August 8, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-eight States—this year, 796 cases; last year, 773 cases; 96 cities—this year, 353 cases; last year, 291 cases, estimated expectancy, 248 cases.

Smallpox.—For the week ended August 7, 1926, 38 States reported 288 cases of smallpox. Last year for the corresponding week they reported 211 cases. Ninety-six cities reported smallpox for the week as follows: 1926, 43 cases; 1925, 50 cases, estimated expectancy, 43 cases. One death from smallpox was reported by these cities for the week this year—at Los Angeles, Calif.

Typhoid fever.—One thousand and seventy-five cases of typhoid fever were reported for the week ended August 7, 1926, by 37 States. For the corresponding week of 1925 the same States reported 1,329 cases of this disease. Ninety-six cities reported 161 cases of typhoid fever for the week this year and 225 cases for the corresponding week last year. The estimated expectancy for these cities was 208 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 91 cities, with a population of more than 29,300,000, as follows: 1926, 320 deaths; 1925, 302 deaths.

City reports for week ended August 7, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	0	1	0	0	0	0	0	0
New Hampshire									
Concord	22,546	0	1	0	0	0	2	0	1
Manchester	83,097	0	0	0	0	0	1	0	1
Vermont:									
Barre	10,008	0	0	0	0	0	0	0	0
Massachusetts									
Boston	779,620	10	32	8	1	0	18	23	10
Fall River	128,993	0	3	0	0	0	0	2	0
Springfield	142,065	3	1	0	0	0	0	0	2
Worcester	190,757	1	2	5	0	0	0	1	2

City reports for week ended August 7, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND—con.									
Rhode Island									
Pawtucket	69,760	0	1	1	0	0	0	0	1
Providence	267,918	0	4	2	0	0	5	0	1
Connecticut									
Bridgeport	(1)	0	4	1	0	0	0	0	2
Hartford	160,197	0	3	0	0	0	0	0	3
New Haven	178,927	1	1	0	0	0	10	0	1
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	1	11	5	0	0	3	1	4
New York	5,873,356	43	128	89	22	2	19	23	63
Rochester	316,786	2	5	14	0	0	2	1	4
Syracuse	182,003	4	3	0	--------	1	23	0	3
New Jersey									
Camden	128,642	1	2	2	0	0	2	0	2
Newark	452,513	14	8	5	3	0	6	5	5
Trenton	132,020	0	2	1	0	0	0	0	0
Pennsylvania									
Philadelphia	1,979,364	23	34	49	--------	0	15	5	24
Pittsburgh	631,563	9	13	11	--------	2	10	0	7
Reading	112,707	1	2	0	--------	0	4	0	0
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	3	5	6	0	1	18	3	2
Cleveland	936,485	24	17	36	0	0	2	1	10
Columbus	279,836	2	2	7	0	0	3	0	3
Toledo	287,380	3	5	3	0	0	7	0	0
Indiana									
Fort Wayne	97,846	1	2	0	0	0	4	0	0
Indianapolis	358,819	1	5	3	0	0	3	0	7
South Bend	80,091	1	1	0	0	0	2	0	0
Terre Haute	71,071	0	0	0	0	0	1	0	1
Illinois									
Chicago	2,995,239	41	60	25	1	1	67	13	16
Peoria	81,564	0	1	0	0	0	0	0	0
Springfield	63,923	0	1	0	0	0	0	0	2
Michigan									
Detroit	1,245,824	6	24	54	0	0	2	0	12
Flint	130,316	1	3	2	0	0	3	1	1
Grand Rapids	153,698	1	2	0	0	0	7	0	2
Wisconsin									
Kenosha	50,891	0	1	0	0	0	26	0	0
Madison	46,385	--------	0	--------	--------	--------	--------	--------	--------
Milwaukee	509,192	12	9	15	0	0	25	8	5
Racine	67,707	0	0	4	0	0	3	4	0
Superior	39,671	0	0	1	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	0	1	0	0	0	7	0	0
Minneapolis	425,435	15	10	10	0	0	1	0	8
St. Paul	246,001	1	10	1	0	0	5	0	6
Iowa									
Sioux City	78,411	0	0	1	0	--------	0	0	--------
Waterloo	36,771	0	0	1	0	--------	3	0	--------
Missouri									
Kansas City	367,481	0	2	0	0	0	2	1	6
St. Joseph	78,342	0	1	0	0	0	0	0	1
St. Louis	821,543	3	17	10	0	0	6	2	--------
North Dakota									
Fargo	26,403	0	0	0	0	0	3	2	0
Grand Forks	14,811	0	0	0	0	--------	3	0	--------
South Dakota									
Aberdeen	15,036	0	0	1	0	--------	2	0	--------
Sioux Falls	30,127	--------	0	--------	--------	--------	--------	--------	--------
Nebraska									
Lincoln	60,941	0	1	0	0	0	1	0	0
Omaha	211,768	1	4	1	0	0	2	0	3
Kansas									
Topeka	55,411	0	0	2	0	0	0	0	0
Wichita	88,367	0	1	0	0	0	0	0	0

[1] No estimate made

City reports for week ended August 7, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	1	3	0	0	0	0	2
Maryland									
Baltimore	796,296	9	11	3	0	0	4	4	11
Cumberland	33,741	0	0	0	0	0	0	0	1
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia									
Washington	497,906	4	4	6	0	0	1	0	8
Virginia									
Lynchburg	30,395	2	0	2	0	0	1	0	0
Norfolk	(1)		0						
Richmond	186,403	0	3	3	0	1	14	1	5
Roanoke	58,208	1	1	0	0	0	0	0	0
West Virginia									
Charleston	49,019	0	0	1	1	1	1	0	0
Huntington	63,485	0	0	0	0	0	0	0	0
Wheeling	56,208	0	1	1	0	0	0	0	0
North Carolina									
Raleigh	30,371	0	0	1	0	0	1	0	0
Wilmington	37,061	0	0	0	0	0	0	0	0
Winston-Salem	69,031	0	1	2	0	0	1	0	1
South Carolina									
Charleston	73,125	0	0	0	11	0	0	1	0
Columbia	41,225	0	0	0	0	0	0	0	0
Greenville	27,311	0	0	0	0	0	0	0	0
Georgia									
Atlanta	(1)	0	2	0	2	0	0	0	4
Brunswick	16,809	0	0	0	0	0	0	0	0
Savannah	93,134	0	0	1	0	0	0	0	3
Florida									
Miami	69,754	0		6	0	0	1	0	0
St. Petersburg	26,847		0			0			0
Tampa	94,743	0	0	0	0	0	2	0	0
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	1	0	0	0	0	0	0
Louisville	305,935	5	2	0	1	0	1	0	2
Tennessee									
Memphis	174,533	4	2	1	0	0	2	0	4
Nashville	136,220	1	0	0	0	0	0	0	2
Alabama									
Birmingham	205,670	0	2	1	0	0	5	0	2
Mobile	65,955	0	0	0	0	0	0	0	0
Montgomery	46,481	0	1	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	1	0	0		0	0	
Little Rock	74,216	0	0	0	0	0	0	1	1
Louisiana									
New Orleans	414,493	0	5	4	1	1	1	0	10
Shreveport	57,857	0	1	0	0	0	0	0	1
Oklahoma									
Oklahoma City	(1)	0	1	1	0	0	1	0	2
Texas									
Dallas	194,450	0	3	1	0	0	0	0	2
Galveston	48,375	0	0	0	0	0	0	0	4
Houston	164,954		1						
San Antonio	198,069	0	0	2	0	0	1	0	0
MOUNTAIN									
Montana									
Billings	17,971	0	0	0	0	0	0	0	0
Great Falls	29,883	0	1	0	0	0	0	0	0
Helena	12,037		1						
Missoula	12,668	0	0	0	0	0	0	0	0
Idaho									
Boise	23,042	0	1	1	0	0	0	0	0

[1] No estimate made

City reports for week ended August 7, 1926—Continued

Division, State, and city	Population, July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MOUNTAIN—continued									
Colorado									
Denver	280,911	1	9	10	--------	1	13	0	6
Pueblo	42,787	0	1	0	0	0	0	0	0
New Mexico									
Albuquerque	21,000	0	0	1	0	0	0	0	2
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	0
Utah									
Salt Lake City	130,948	2	2	2	0	0	2	2	1
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	4	4	0	0	--------	9	4	--------
Spokane	108,897	4	1	5	0	--------	8	0	--------
Tacoma	104,455	0	2	4	0	0	0	0	1
Oregon									
Portland	282,383	0	4	7	0	2	4	1	2
California									
Los Angeles	(1)	3	25	23	3	1	4	4	10
Sacramento	72,260	1	2	1	0	0	0	2	1
San Francisco	557,530	4	12	5	3	2	24	3	4

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine											
Portland	1	0	0	0	0	2	1	0	0	7	12
New Hampshire											
Concord	1	0	0	0	0	1	0	0	0	3	11
Manchester	0	0	0	0	0	2	0	0	0	0	16
Vermont											
Barre	0	0	0	0	0	1	0	0	0	0	2
Massachusetts											
Boston	13	26	0	0	0	16	3	3	0	40	150
Fall River	1	3	0	0	0	2	2	0	0	5	35
Springfield	1	1	0	0	0	4	0	0	0	3	34
Worcester	2	5	0	0	0	1	0	0	0	1	30
Rhode Island											
Pawtucket	0	1	0	0	0	0	0	0	0	0	12
Providence	2	0	0	0	0	2	1	1	0	7	40
Connecticut											
Bridgeport	2	5	0	0	0	1	0	1	0	0	23
Hartford	1	3	0	0	0	4	2	0	1	3	39
New Haven	1	0	0	0	0	2	3	0	0	1	26
MIDDLE ATLANTIC											
New York											
Buffalo	5	2	0	0	0	5	2	0	0	30	112
New York	30	38	0	2	0	[2] 80	34	31	2	83	1,121
Rochester	4	0	0	0	0	3	1	0	0	3	63
Syracuse	3	2	0	0	0	1	0	0	0	13	36
New Jersey											
Camden	0	3	0	0	0	0	2	1	0	2	28
Newark	4	10	0	1	0	9	2	0	0	27	91
Trenton	0	0	0	0	0	2	1	0	0	0	19
Pennsylvania											
Philadelphia	18	20	0	0	0	38	11	6	1	58	390
Pittsburgh	9	2	0	0	0	7	3	0	0	66	148
Reading	0	0	0	0	0	0	1	0	0	13	23

[1] No estimate made.

[2] Pulmonary tuberculosis only.

City reports for week ended August 7, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
EAST NORTH CENTRAL											
Ohio											
Cincinnati	2	9	1	0	0	15	2	1	1	5	132
Cleveland	6	18	2	3	0	9	4	2	2	71	168
Columbus	2	2	0	0	0	8	2	2	0	6	68
Toledo	4	2	1	0	0	5	2	2	1	66	55
Indiana											
Fort Wayne	0	1	0	0	0	0	1	1	0	0	19
Indianapolis	2	1	1	9	0	8	2	0	1	19	89
South Bend	1	1	1	0	0	1	0	0	0	2	9
Terre Haute	0	0	0	0	0	2	0	1	0	1	26
Illinois											
Chicago	27	28	0	0	0	47	5	6	0	66	585
Peoria	0	1	0	0	0	0	0	1	0	6	12
Springfield	1	1	0	0	0	0	1	0	0	1	23
Michigan											
Detroit	22	30	3	1	0	11	5	3	0	91	243
Flint	3	6	1	0	0	0	1	0	0	6	20
Grand Rapids	2	10	0	0	0	1	1	1	0	3	23
Wisconsin											
Kenosha	0	1	1	0	0	0	0	0	0	16	4
Madison	1	------	0	------	------	------	0	------	------	------	------
Milwaukee	7	5	1	0	0	8	1	0	0	85	87
Racine	1	0	1	0	0	0	0	0	0	9	------
Superior	1	3	1	0	0	0	0	0	0	0	4
WEST NORTH CENTRAL											
Minnesota											
Duluth	3	7	1	0	0	1	1	0	0	0	23
Minneapolis	9	13	2	0	0	2	1	0	0	1	81
St. Paul	5	13	2	1	0	1	2	0	1	25	46
Iowa											
Sioux City	0	2	0	1	------	------	0	0	------	0	------
Waterloo	0	0	0	0	------	------	0	2	------	1	------
Missouri:											
Kansas City	2	2	1	0	0	9	2	3	0	6	85
St. Joseph	0	0	0	0	0	0	1	0	0	0	15
St. Louis	6	6	1	4	0	13	6	2	0	33	180
North Dakota:											
Fargo	0	2	0	0	0	0	0	0	0	0	7
Grand Forks	0	3	0	0	------	------	0	0	------	0	0
South Dakota:											
Aberdeen	0	0	0	0	------	------	0	0	------	2	------
Sioux Falls	0	------	0	------	------	------	0	------	------	------	------
Nebraska:											
Lincoln	0	2	0	0	0	0	0	0	0	0	11
Omaha	1	3	2	0	0	1	0	0	0	0	48
Kansas											
Topeka	1	0	0	0	0	1	0	2	0	15	9
Wichita	1	2	0	1	0	0	2	0	0	7	29
SOUTH ATLANTIC											
Delaware											
Wilmington	0	2	0	0	0	1	1	0	0	3	18
Maryland											
Baltimore	5	5	1	0	0	14	9	9	0	70	206
Cumberland	0	0	0	0	0	0	0	0	0	0	6
Frederick	0	0	0	0	0	0	0	0	0	0	2
District of Col.:											
Washington	3	8	0	0	0	18	5	4	0	22	125
Virginia											
Lynchburg	0	1	0	0	0	0	1	1	0	11	15
Norfolk	0	------	0	------	------	------	3	------	------	------	------
Richmond	2	1	0	0	0	1	3	0	0	2	49
Roanoke	1	1	0	2	0	2	2	0	0	0	17
West Virginia:											
Charleston	1	0	1	0	0	0	1	0	0	0	16
Huntington	0	0	0	0	0	1	1	0	0	0	13
Wheeling	1	0	0	0	0	1	1	2	0	3	12
North Carolina:											
Raleigh	0	0	0	0	0	1	1	1	0	10	------
Wilmington	0	0	0	0	0	1	0	0	0	9	7
Winston-Salem	1	0	0	0	0	1	3	1	0	9	25

City reports for week ended August 7, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
SOUTH ATLANTIC—continued											
South Carolina											
Charleston	1	0	0	0	0	0	3	10	0	0	19
Columbia	0	0	1	0	0	0	1	2	0	3	------
Greenville	0	0	0	1	0	0	2	1	0	5	16
Georgia											
Atlanta	1	0	2	0	0	7	3	2	1	2	65
Brunswick	0	0	0	0	0	0	0	0	0	0	0
Savannah	0	0	0	1	0	3	2	0	0	0	30
Florida											
Miami	------	1	------	0	0	0	------	2	0	3	30
St. Petersburg	0	------	0	------	0	0	0	------	0	------	------
Tampa	0	2	0	0	0	0	0	2	0	0	------
EAST SOUTH CENTRAL											
Kentucky											
Covington	1	0	0	0	0	0	0	2	0	0	------
Louisville	0	1	0	0	0	5	6	5	1	4	68
Tennessee											
Memphis	0	3	0	3	0	3	6	10	1	9	66
Nashville	0	0	1	0	0	2	7	8	2	6	35
Alabama											
Birmingham	2	2	1	0	0	2	6	6	2	5	59
Mobile	1	0	0	0	0	1	1	1	0	0	10
Montgomery	0	0	0	0	0	0	2	3	0	0	9
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	0	0	------	------	1	0	------	2	------
Little Rock	0	1	0	0	0	1	3	1	1	0	------
Louisiana											
New Orleans	1	2	0	0	0	13	5	4	1	5	141
Shreveport	0	0	1	0	0	2	3	0	1	0	30
Oklahoma											
Oklahoma City	0	0	1	0	0	1	2	4	0	0	21
Texas											
Dallas	2	0	1	3	0	1	4	1	0	5	47
Galveston	0	0	0	0	0	3	1	0	0	0	22
Houston	1	------	0	------	------	------	1	------	------	------	------
San Antonio	0	0	1	0	0	12	1	4	0	0	55
MOUNTAIN											
Montana											
Billings	0	0	0	0	0	0	0	0	0	0	2
Great Falls	0	1	1	0	0	0	1	0	0	1	9
Helena	0	------	0	------	------	------	0	------	------	------	------
Missoula	0	1	0	0	0	0	1	0	0	0	3
Idaho											
Boise	0	1	0	0	0	0	0	0	0	0	3
Colorado											
Denver	3	4	2	1	0	7	2	0	1	5	60
Pueblo	0	0	0	0	0	0	0	0	0	0	12
New Mexico											
Albuquerque	0	1	0	0	0	5	0	1	0	4	13
Arizona											
Phoenix	------	0	0	0	0	5	0	0	0	0	17
Utah											
Salt Lake City	2	0	1	0	0	0	1	3	0	17	26
Nevada											
Reno	0	0	0	0	0	0	0	0	0	0	3
PACIFIC											
Washington											
Seattle	2	5	2	0	------	------	1	0	------	6	------
Spokane	2	6	2	0	------	------	0	1	------	4	------
Tacoma	1	2	0	5	0	1	1	1	0	1	27
Oregon											
Portland	3	5	5	8	0	0	0	0	0	0	66
California											
Los Angeles	6	12	3	4	1	30	5	3	0	4	214
Sacramento	1	2	0	0	0	2	1	1	1	2	28
San Francisco	4	4	1	0	0	6	2	5	0	4	116

City reports for week ended August 7, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
New Hampshire									
Manchester	0	1	0	0	0	0	0	0	0
Massachusetts									
Boston	1	0	1	0	0	0	1	2	0
Springfield	0	0	0	0	0	0	0	2	0
Worcester	0	0	0	0	0	0	0	2	0
Rhode Island									
Providence	1	0	0	0	0	0	0	0	0
MIDDLE ATLANTIC									
New York									
Buffalo	1	0	0	0	0	0	0	5	1
New York	6	5	8	9	0	0	6	4	1
Syracuse	0	0	0	0	0	0	0	4	0
New Jersey									
Trenton	0	0	0	1	0	0	0	0	0
Pennsylvania									
Philadelphia	1	1	0	1	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio									
Columbus	0	0	0	1	0	0	0	0	0
Illinois:									
Chicago	1	0	1	0	1	1	3	0	0
Michigan									
Detroit	0	0	0	1	0	0	0	1	0
Wisconsin									
Milwaukee	0	0	0	0	0	0	1	1	0
WEST NORTH CENTRAL									
Missouri									
St Louis	0	0	0	0	0	0	1	1	0
SOUTH ATLANTIC									
Maryland									
Baltimore	0	0	1	2	0	0	1	0	0
North Carolina.									
Raleigh	0	0	0	0	0	1	0	0	0
Wilmington	0	0	0	0	0	0	0	1	0
Winston-Salem	0	0	0	0	2	2	0	0	0
South Carolina									
Charleston	0	0	0	0	7	1	0	0	0
Georgia.									
Atlanta	1	0	0	0	1	1	0	0	0
Savannah	0	0	0	0	0	0	0	1	1
EAST SOUTH CENTRAL									
Kentucky									
Louisville	1	1	0	0	0	0	0	0	0
Tennessee									
Memphis	1	0	0	0	0	1	0	1	0
Alabama									
Birmingham	0	0	0	0	0	2	1	0	0
WEST SOUTH CENTRAL									
Arkansas.									
Little Rock	0	0	0	0	0	1	0	0	0
Louisiana									
New Orleans	0	0	0	0	2	1	0	0	0
Shreveport	0	0	0	0	0	1	0	0	0
Texas									
Dallas	0	0	0	0	0	1	0	0	0
MOUNTAIN									
Idaho									
Boise	1	1	0	0	0	0	0	0	0
Utah									
Salt Lake City	0	1	0	0	0	0	0	0	0
PACIFIC									
California									
Los Angeles	0	1	0	0	1	2	0	2	0
Sacramento	0	0	0	0	0	1	0	0	0

The following table gives the rates per 100,000 population for 102 cities for the five-week period ended August 7, 1926, compared with those for a like period ended August 8, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 102 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, July 4 to August 7, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug. 7, 1926
102 cities	93	[2] 102	76	[2] 94	75	[2] 90	[3] 75	[2] 80	[4] 83	[5] 79
New England	60	57	60	78	60	33	60	40	79	40
Middle Atlantic	126	120	96	101	90	109	92	103	83	88
East North Central	83	106	68	109	63	99	69	83	94	[6] 105
West North Central	91	[2] 93	83	[2] 107	103	[2] 95	97	[2] 85	[7] 105	[2] 52
South Atlantic	52	66	50	32	42	34	[3] 48	21	52	[8] 46
East South Central	21	5	11	21	11	10	11	21	26	10
West South Central	35	43	26	26	66	39	40	39	22	[9] 35
Mountain	102	118	120	109	111	64	148	91	[10] 66	[10] 121
Pacific	119	181	94	159	99	175	64	119	141	102

MEASLES CASE RATES

	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug. 7, 1926
102 cities	186	[2] 303	153	[2] 215	101	[2] 155	[3] 70	[2] 103	[4] 51	[5] 67
New England	273	246	252	180	208	109	130	83	127	83
Middle Atlantic	248	211	198	129	127	108	77	63	69	42
East North Central	210	448	178	365	111	243	68	171	44	[6] 96
West North Central	34	[2] 417	28	[2] 191	18	[2] 183	30	[2] 93	[7] 10	[2] 58
South Atlantic	200	293	140	203	90	128	[3] 68	115	42	[8] 50
East South Central	110	285	74	171	58	125	26	93	11	42
West South Central	0	47	0	17	4	13	0	9	0	[9] 10
Mountain	55	264	28	191	37	173	102	127	[10] 19	[10] 139
Pacific	39	337	61	329	19	213	33	121	28	121

SCARLET FEVER CASE RATES

	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug. 7, 1926
102 cities	87	[2] 127	58	[2] 93	55	[2] 83	[3] 54	[2] 73	[4] 51	[5] 61
New England	141	138	77	99	69	85	72	118	98	104
Middle Atlantic	81	129	45	73	42	75	37	52	33	38
East North Central	91	145	63	118	63	93	60	85	48	[6] 79
West North Central	139	[2] 205	105	[2] 185	115	[2] 127	121	[2] 143	[7] 117	[2] 101
South Atlantic	42	64	44	45	15	36	[3] 34	34	21	[8] 40
East South Central	116	52	74	52	26	93	58	62	58	31
West South Central	9	34	22	52	31	82	26	39	53	[9] 15
Mountain	148	55	83	91	157	64	83	36	[10] 38	[10] 65
Pacific	50	121	58	94	44	92	47	86	61	84

[1] The figures given in this table are rates per 100,000 population, annual basis—and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Sioux Falls, S. Dak., not included.
[3] Tampa, Fla., not included.
[4] Waterloo, Iowa, and Helena, Mont., not included.
[5] Madison, Wis., Sioux Falls, S. Dak., Norfolk, Va., Houston, Tex., and Helena, Mont., not included.
[6] Madison, Wis., not included.
[7] Waterloo, Iowa, not included.
[8] Norfolk, Va., not included.
[9] Houston, Tex., not included.
[10] Helena, Mont., not included.

Summary of weekly reports from cities, July 4 to August 7, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925—Continued

SMALLPOX CASE RATES

	Week ended—									
	July 11, 1925	July 10, 1926	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926
102 cities	16	[2] 7	14	[2] 7	10	[2] 6	[3] 9	[2] 5	[4] 9	[5] 7
New England	2	0	2	0	5	0	0	0	0	0
Middle Atlantic	0	0	1	1	0	0	0	1	0	1
East North Central	11	7	9	6	8	8	3	6	6	[6] 9
West North Central	20	[2] 28	16	[2] 26	12	[2] 14	14	[2] 4	[7] 8	[2] 14
South Atlantic	23	9	8	6	15	6	[3] 2	2	2	[8] 8
East South Central	74	0	42	5	37	10	21	5	47	16
West South Central	4	4	13	13	4	13	4	4	13	[9] 15
Mountain	18	9	18	9	0	27	55	9	[10] 19	[10] 9
Pacific	97	24	113	22	64	8	80	32	64	24

TYPHOID FEVER CASE RATES

102 cities	33	[2] 13	36	[2] 22	33	[2] 18	[3] 40	[2] 30	[4] 40	[5] 28
New England	24	9	31	12	22	9	22	14	26	12
Middle Atlantic	17	7	25	11	21	9	30	23	23	19
East North Central	13	5	11	5	8	6	10	10	20	[6] 12
West North Central	42	[2] 16	42	[2] 14	38	[2] 12	46	[2] 22	[7] 41	[2] 18
South Atlantic	56	43	52	58	50	47	[3] 64	54	56	[8] 70
East South Central	163	52	205	166	163	135	168	259	252	182
West South Central	159	30	128	56	163	30	154	47	123	[9] 50
Mountain	28	0	18	0	46	46	55	36	[10] 104	[10] 28
Pacific	17	13	30	22	28	8	44	11	17	30

INFLUENZA DEATH RATES

96 cities	2	[2] 4	2	[2] 4	2	[2] 3	[3] 1	[2] 2	[10] 2	[5] 2
New England	0	7	0	0	0	2	0	0	5	0
Middle Atlantic	2	1	2	4	3	2	1	1	2	2
East North Central	2	7	3	4	1	4	0	1	3	[6] 1
West North Central	0	[2] 0	0	[2] 0	4	[2] 2	0	[2] 0	0	[2] 0
South Atlantic	0	0	4	6	4	4	[3] 2	2	6	[8] 4
East South Central	16	16	0	21	5	5	0	5	5	0
West South Central	10	5	10	9	0	9	0	24	5	[9] 6
Mountain	0	0	0	9	9	9	0	0	[10] 0	[10] 9
Pacific	0	4	4	4	0	4	0	4	0	11

PNEUMONIA DEATH RATES

96 cities	59	[2] 67	54	[2] 60	48	[2] 54	[3] 59	[2] 48	[10] 52	[5] 54
New England	43	54	48	57	50	33	53	33	36	54
Middle Atlantic	64	73	62	74	51	64	65	41	65	56
East North Central	55	65	44	46	37	46	48	48	36	[6] 42
West North Central	38	[2] 53	53	[2] 38	40	[2] 40	40	[2] 57	51	[2] 51
South Atlantic	65	71	48	54	52	53	[3] 60	51	50	[8] 70
East South Central	84	119	68	109	58	99	63	62	63	52
West South Central	58	57	73	85	63	57	116	76	68	[9] 101
Mountain	74	36	83	36	55	64	74	55	[10] 23	[10] 65
Pacific	65	53	40	46	58	35	62	71	69	57

[2] Sioux Falls, S Dak, not included
[3] Tampa, Fla, not included
[4] Waterloo, Iowa, and Helena, Mont, not included
[5] Madison, Wis, Sioux Falls, S Dak, Norfolk, Va, Houston, Tex., and Helena, Mont, not included
[6] Madison, Wis., not included
[7] Waterloo, Iowa, not included
[8] Norfolk, Va, not included
[9] Houston, Tex, not included.
[10] Helena, Mont, not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	102	96	29, 930, 185	30, 458, 186	29, 251, 658	29, 764, 201
New England	12	12	2, 176, 124	2, 206, 124	2, 176, 124	2, 206, 124
Middle Atlantic	10	10	10, 346, 970	10, 476, 970	10, 346, 970	10, 476, 970
East North Central	16	16	7, 481, 656	7, 655, 436	7, 481, 656	7, 655, 436
West North Central	13	11	2 580, 151	2, 619, 719	2, 461, 380	2, 499, 036
South Atlantic	21	21	2, 716, 070	2, 776, 070	2, 716, 070	2, 776, 070
East South Central	7	7	993, 103	1, 004, 953	993, 103	1, 004, 953
West South Central	8	6	1, 184, 057	1, 212, 057	1, 078, 198	1, 103, 695
Mountain	9	9	563, 912	572, 773	563, 912	572, 773
Pacific	6	4	1, 888, 142	1, 934, 084	1, 434, 245	1, 469, 144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended July 24, 1926.—The following report for the week ended July 24, 1926, was transmitted by the Far Eastern Bureau of the Health Section of the League of Nations' Secretariat, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt—Alexandria	0	0	0	0	3	0
British India						
Bombay	----	1	---	1	16	4
Madras	----	0	---	0	4	3
Rangoon	----	3	---	1	1	0
Negapatam	----	0	---	1	0	0
Karachi	----	0	---	0	2	0
Vizagapatam	----	0	---	1	0	0
Dutch East Indies—Surabaya	0	0	0	0	1	0
Siam—Bangkok	1	1	10	4	6	5
French Indo-China—Saigon and Cholon	0	1	0	3	0	0
China						
Amoy	6	----	0	0	0	0
Shanghai	0	0	29	32	----	1
Hong-Kong	0	0	0	0	1	0
Kwantung—Dairen	0	0	0	0	1	1
U S S R.—Vladivostok	0	0	0	0	6	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Iraq —Basra.

British India —Chittagong, Cochin, Tuticorin.

Ceylon —Colombo.

Federated Malay States.—Port Swettenham.

Straits Settlements.—Penang, Singapore.

Dutch East Indies.—Batavia, Samarang, Cheribon, Belawan-Deli, Palembang, Sabang, Makassar, Menado, Banjermasin, Balik-Papan, Tarakan, Padang, Samarinda, Pontianak.

Sarawak —Kuching.

British North Borneo —Sandakan, Jesselton, Kudat, Tawao.

Portuguese Timor —Dilly.

Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.

French Indo-China.—Turane, Haiphong.

Formosa.—Keelung

Kwantung.—Port Arthur.

Japan —Osaka, Nagasaki, Yokohama, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki.

Korea.—Chemulpo, Fusan.

Manchuria.—Antung, Mukden, Changchun, Harbin.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.

New Guinea.—Port Moresby.

New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.

New Caledonia.—Noumea.

Fiji.—Suva.

Hawaii.—Honolulu.

AFRICA

Egypt.—Port Said, Suez.

Anglo-Egyptian Sudan.—Port Sudan, Suakin.

Eritrea.—Massaua.

French Somaliland.—Jibuti.

British Somaliland.—Berbera.

Italian Somaliland.—Mogadiscio.

Kenya.—Mombasa.

Zanzibar.—Zanzibar.

Tanganyika.—Dar-es-Salaam.

Seychelles.—Victoria.

Mauritius.—Port Louis.

Portuguese East Africa.—Mozambique, Beira, Lourenço Marques.

Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

British India.—Calcutta.

Madagascar.—Tamatave, Majunga.

CANADA

Communicable diseases—Week ended August 7, 1926.—The Canadian Minister of Health reports cases of certain communicable diseases in seven Provinces of Canada for the week ended August 7, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal fever			3	2				5
Influenza	5							5
Lethargic encephalitis	1							1
Poliomyelitis			1	1				2
Smallpox				2		12		14
Typhoid fever		2	3	8	9			22

ESTHONIA

Communicable diseases—June, 1926.—During the month of June, 1926, communicable diseases were reported in the Republic of Esthonia as follows:

Disease	Cases	Disease	Cases
Diphtheria	18	Scarlet fever	154
Leprosy	2	Smallpox	2
Measles	641	Tuberculosis	162
Paratyphoid fever	5	Typhoid fever	39

FRANCE

Plague—Marseille and vicinity of Paris—Information has been received under date of August 2, 1926, showing the occurrence of a fatal case of plague in a dock laborer at Marseille, France, July 8, 1926, and of a case, the date of occurrence not stated, at St. Denis, in the vicinity of Paris

GREAT BRITAIN (SCOTLAND)

Further relative to typhus fever outbreak—Glasgow—Information received under date of August 3, 1926, relative to seven cases of typhus fever at Glasgow reported that date,[1] shows that the cases occurred in the same family

HAWAII TERRITORY

Plague-infected rat—Paauhau—July 24, 1926.—A plague-infected rat was reported trapped at Paauhau, Hawaii Territory, July 24, 1926.

JAPAN

Plague—Plague-infected rats—Yokohama—July 6-21, 1926.—Under date of July 6, 1926, information was received of the occurrence of three fatal cases of plague at Yokohama[2] To July 21, 1926, six cases and the finding of four plague-infected rats were reported at Yokohama The occurrence was stated to have been in the locality of the canals used for landing cargo from lighters.

LATVIA

Communicable diseases—May, 1926.—During the month of May, 1926, communicable diseases were reported in the Republic of Latvia as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	2	Puerperal fever	2
Diphtheria	35	Rabies	1
Dysentery	3	Scarlet fever	241
Erysipelas	35	Tetanus	1
Lethargic encephalitis	1	Trachoma	34
Measles	199	Typhoid fever	46
Mumps	20	Typhus fever	7
Paratyphoid fever	3	Whooping cough	84

Population, estimated, 1,850,000

UNION OF SOUTH AFRICA

Plague—Cape Province—June 27-July 3, 1926—During the week ended July 3, 1926, two cases of plague were reported in the Cape Province, Union of South Africa. The occurrence was in the colored or native population of the districts of Calvinia and Williston.

[1] Public Health Reports, Aug 13, 1926, p 1750.
[2] Public Health Reports, July 16, 1926, p 1506.

Investigation of plague conditions in infected area—Information received under date of July 16, 1926, indicates that plague infection, which had been known to exist among veldt rodents in the Kenhardt District of the Cape Province for about two years, had recently spread south and southwest to the Calvinia and Williston Districts, extending south to a point half way between these districts and west as far as Nieuwoudtville. On June 11, 1926, a suspect case of plague in man and suspicious mortality among rodents in this area were noted. From that date to the present one case, fatal, in a European, and nine cases, with three deaths, in the colored population, have been reported. The area in which the cases occurred was stated to be heavily infested with Namaqua gerbilles (the rodent jerboa) and hares, these animals being also heavily infested with fleas. In three of the human cases reported the patients were stated to have handled or eaten dead hares. The cases were bubonic in type.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

Reports Received During the Week Ended August 27, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
French Settlements in India				May 8-15, 1926, 1 case
India				June 6-19, 1926 Cases, 3,324, deaths, 2,173.
Indo-China (French)				
Saigon	June 13-26	14	6	
Do	June 27-July 3	19	14	
Siam				
Bangkok	June 20-26	56	26	
Do	June 27-July 3	36	14	

PLAGUE

Place	Date	Cases	Deaths	Remarks
France				
Marseille	July 8	1	1	Reported July 24, 1926
St Denis	Reported Aug 2	1		Vicinity of Paris
Hawaii				
Paauhau				July 18-24, 1926 Plague-infected rat trapped.
India				July 6-19, 1926. Cases, 2,898, deaths, 2,406
Madras Presidency	June 20-26	29	13	
Indo-China (French)				
Saigon	June 13-26	5	2	
Japan				
Yokohama	July 2-21	6		Four plague-infected rats found.
Madagascar				
Tananarive Province	June 1-15	23	20	Bubonic, cases, 5, deaths, 4; pneumonic, cases, 16, deaths, 14, septicemic, cases, 2, deaths, 2
Nigeria				Apr 1-30, 1926 Cases, 34, deaths, 30
Russia				Mar. 1-31, 1926 Cases, 5.
Siam.				
Bangkok	June 20-26	1	1	
Syria				
Beirut	July 1-10	1		
Tunisia				June 1-20, 1926 Cases, 80.
Union of South Africa				
Cape Province—				
Calvinia district	June 27-July 3	1		Farm Infection in veldt rodents.
Williston district	do	1		Do

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended August 27, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Canada				
Ontario	Aug 1-7	2		
Saskatchewan	do	12		
Ceylon				Mar 14-May 29, 1926 Cases, 44; deaths, 3
China				
Amoy	July 4-10	1		
Antung	July 12-18	1		
Canton	May 1-31	4	2	
Chungking	July 4-10			Present.
Manchuria—				
Harbin	July 1-7	2		
Manchurian Ry	July 11-17	4		At 4 stations
Swatow	July 4-10			Sporadic
Chosen				April, 1926 Cases, 168; deaths, 43
Esthonia				June 1-30, 1926 Cases, 2
French Settlement in India	May 9-15	27	27	
Gold Coast	Apr 1-30	25	1	
Great Britain				
England and Wales				July 25-31, 1926. Cases, 66
India				June 6-19, 1926 Cases, 10,013; deaths, 2,925
Indo-China (French)				
Saigon	June 20-26	1		
Iraq				
Baghdad	July 4-10	1	1	
Italy	May 16-June 5	8		
Japan	May 2-29	422		
Mexico				
Guadalajara	Aug 3-9		1	
San Luis Potosi	Aug 1-7		1	
Nigeria				Apr 1-30, 1926 Cases, 134; deaths, 21
Portugal				
Oporto	July 18-24	1		
Russia				Mar 1-31, 1926 Cases, 700.
Tunisia				June 1-30, 1926 Cases, 5
Union of South Africa				
Orange Free State	June 27-July 3			Outbreaks.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
China				
Antung	July 5-18	10	1	
Canton	May 1-31	1		
Chosen				Apr. 1-30, 1926 Cases, 194; deaths, 19.
Chemulpo	June 1-30	10	1	
Gensan	do	1		
Seoul	do	8	3	
Czechoslovakia				May 1-31, 1926. Cases, 6.
Great Britain (Scotland)				
Glasgow	Reported Aug. 3	7		Occurring in same family group.
Japan				May 2-29, 1926 Cases, 13.
Latvia	May 1-31	7		
Lithuania				May 1-31, 1926 Cases, 66; deaths, 8.
Morocco				May 1-31, 1926 Cases, 115
Poland				May 23-June 5, 1926. Cases, 216; deaths, 8
Rumania				Apr. 1-10, 1926 Cases, 354; deaths, 49.
Russia				Mar. 1-31, 1926 Cases, 4,944.
Tunisia				June 1-30, 1926. Cases, 16.
Union of South Africa				
Cape Province	June 27-July 3			Outbreaks

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil				
Bahia	June 20-26	2	1	
Gold Coast	Apr 1-10	3	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 20, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18–May 1, 1926 Cases, 30; deaths, 24
China				
Shanghai	Reported July 20	35	8	
French Settlements in India				Mar 7–May 8, 1926 Cases, 18; deaths, 18
India				Apr 25–June 5, 1926 Cases, 13, 990, deaths, 8,580
Bombay	May 30–June 5	1	1	
Calcutta	Apr 4–May 29	478	418	
Do	June 13–26	73	69	
Do	June 27–July 3	48	46	
Madras	May 16–June 5	2	1	
Rangoon	May 9–June 26	67	44	
Do	June 27–July 3	9	6	
Indo-China				
Saigon	May 2–15	52	48	
Do	May 22–June 12	28	26	
Philippine Islands				
Manila	May 18–24	2	2	
Do	June 27–July 3	1		
Provinces—				
Albay	Apr. 18–24	1	1	
Mindoro	Feb 21–Mar 6	3	3	
Romblon	Dec 14–31	42	43	
Do	Jan 2–23	16	12	
Siam:				
Bangkok	May 2–June 12	1, 325	736	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	June 21–30	1		Under date of July 16, 1926, 2 cases reported.
Azores				
St Michaels—				
Arrifes	May 9–June 26	2		
Livramente	May 15–29	2	1	
British East Africa				
Kisumu	May 16–22	1	1	
Uganda	Mar 1–31	35	34	
Ceylon				
Colombo	May 29–June 5	1	1	
Chile				
Iquique	June 20–26		1	
China				
Amoy	Apr 18–June 26	40	30	
Do	June 27–July 3	8		
Foochow	June 6–12			Several cases Not epidemic
Nanking	May 9–July 3			Prevalent
Ecuador.				
Guayaquil	May 16–June 30	6		Rats taken, 30,914, found infected, 31.
Do	July 1–15			Rats taken, 10,020, found infected, 8
Egypt				Jan. 1–July 8, 1926 Cases, 100.
City—				
Suez	May 21–July 1	9	5	
Provinces—				
Beni-Suef	May 28–June 8	8	2	
Gharbieh	June 2	1	1	
Greece:				
Athens	Apr 1–May 31	16	4	Including Piræus.
Patras	May 27–June 12	4	1	
Zante	May 17	1		
India				Apr 25–June 5, 1926: Cases, 49,639; deaths, 38,833.
Bombay	May 2–June 26	16	15	
Karachi	May 23–June 26	15	13	
Madras Presidency	Apr 25–June 19	133	80	
Rangoon	May 9–June 26	20	15	
Do	June 27–July 3	2	3	
Indo-China:				
Saigon	May 23–June 5	3	1	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 20, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Iraq				
Baghdad	Apr 18–June 12	161	108	
Japan				
Yokohama	July 2–3	3	3	
Java				
Batavia	Apr 24–June 19	65	65	
Do	June 26–July 2	12	11	Province
Cheribon	Apr 11–24	3	3	
East Java and Madoera	June 13–19	1	1	
Madagascar				
Ambositra Province	May 1–15	4	4	Septicemic
Moramanga Province	Apr 1–15	2	2	Do
Tananarive Province				Apr 1–May 31, 1926 Cases, 96, deaths, 93
Tamatave (Port)	May 16–31	1	1	
Tananarive Town	Apr 1–May 15	6	6	
Other localities	do	80	77	Bubonic, pneumonic, septicemic.
Nigeria				Feb 1–Mar 31, 1926 Cases, 81, deaths, 62
Peru				May–June, 1926 Cases, 57, deaths, 16
Departments—				
Ancash	May 1–31			Present
Cajamarca	May 1–June 30	10	4	
Ica	May 1–31	1		
Libertad	do	4		Pacasmayo, cases, 2, Trujillo district, cases, 2
Lima	May 1–June 30	29	12	
Piura	June 1–30	13		In Huancabamba district
Russia				Jan 1–Mar 31, 1926 Cases, 37
Senegal				Nov 1–30, 1926 Cases, 3, deaths, 2 Mar 1–Apr 30, 1926 Cases, 15, deaths, 4
Siam:				
Bangkok	May 23–29	1	1	
Straits Settlements				
Singapore	May 2–8	1	1	
Tunisia	May 11–31	70		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan.
Union of South Africa:				
Cape Province	May 16–22	5	3	
Calvinia District	June 13–26	12	6	
Williston District	do	2		
Orange Free State—				
Hoopstad District—Protestpan	May 9–22	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	May 21–June 30	14		
Do	July 1–10	1		
Bolivia				
La Paz	May 1–June 30	14	7	
Brazil				
Bahia	June 20–26	1		
Do	June 27–July 3	1		
Manaos	Apr 1–30		5	
Para	May 16–June 26	26	25	
Do	June 27–July 17	10	6	
Rio de Janeiro	May 2–June 19	132	91	
Santos	Mar 1–7		1	
British East Africa				
Tanganyika	May 2–22		12	
Uganda	Mar 1–31	1		
British South Africa				
Northern Rhodesia	May 18–24	17	6	Natives
Do	June 8–14	5		
Canada				May 30–June 12, 1926. Cases, 46.
Alberta	May 30–June 12	3		
Do	June 27–July 1	1		
Manitoba	May 30–June 26	24		
Do	June 27–July 24	7		
Winnipeg	June 6–12	5	1	
Do	July 4–17	6		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 20, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Canada—Continued				
Ontario				May 30-June 26, 1926: Cases, 36. June 27-July 17: Cases, 41
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2	1	
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
Saskatchewan				May 30-June 19, 1926: Cases, 16. June 27-July 31: Cases, 24.
Regina	July 4-10	2		
Chile				
Antofagasta	June 6-12	1		
China:				
Amoy	May 1-June 26	4	8	
Antung	May 17-June 19	5		
Do	July 4-10	1		
Chungking	May 2-July 3			Present
Foochow	do			Do
Hongkong	May 2-June 26	19	10	
Manchuria	July 6-10	6		Railway stations
An-shan	May 16-June 12	5		South Manchuria Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-July 3	1		Do
Dairen	Apr 26-June 20	69	16	
Fushun	May 16-June 5	4		Do
Harbin	May 14-June 30	21		Do.
Kai-yuan	May 16-June 30	10		Do.
Kungchuling	June 13-19	1		Do.
Liao-yang	May 16-June 30	4		Do
Mukden	do	4		Do.
Penhsihu	May 16-June 19	4		Do
Ssupingkai	May 16-June 30	2		Do
Teshihchiao	do	2		Do
Wa-feng-tien	do	3		Do
Nanking	May 8-July 3			Present
Shanghai	May 2-June 26	10	25	Cases Foreign. Deaths, population of international concession, foreign and native.
Do	June 27-July 10	1	1	
Swatow	May 9-July 3			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-31, 1926: Cases, 200; deaths, 42
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Cairo	Jan 29-Feb 4	1	1	
Esthonia				May 1-31, 1926: Cases, 1.
France				Mar 1-Apr 30, 1926: Cases, 92.
St Etienne	Apr 18-June 15	7	3	
French Settlements in India	Mar 7-May 8	178	178	
Gold Coast	Mar 1-Apr 30	626	13	
Great Britain				
England and Wales				May 23-July 3, 1926: Cases, 1,068. July 4-24, 1926: Cases, 376
Bradford	May 23-29	1		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-17	1		
Nottingham	May 2-June 5	7		
Sheffield	June 13-19	1		
Do	July 4-10	1		
Greece:				
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 20, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
India				Apr 25-June 5, 1926 Cases, 41,055, deaths, 10,793
Bombay	May 2-June 26	220	134	
Do	June 27-July 3	12	8	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-23	24	18	
Do	June 27-July 3	5	5	
Karachi	May 16-June 26	44	18	
Do	June 27-July 10	6	4	
Madras	May 16-June 26	7	4	
Do	June 27-July 10	2		
Rangoon	May 9-June 26	10	5	
Indo-China				
Saigon	May 9-15	1		
Iraq				
Baghdad	May 9-June 26	8	3	
Basra	Apr 18-June 22	34	25	
Italy				Mar 28-May 15 1926 Cases, 18
Jamaica				Apr 25-June 26, 1926 Cases, 201 (Reported as alastrim)
Japan				Apr 11-May 1, 1926 Cases, 142.
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Tokyo	June 26-July 3	2		
Yokohoma	May 2-8	2		
Java				
Batavia	May 15-June 25	2		Province
East Java and Madoera	Apr 11-June 19	78	5	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Latvia				Apr 1-30, 1926 Cases, 3
Mexico				Feb 1-Mar 31, 1926 Deaths, 602.
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-July 19		3	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present. 100 miles from Chihuahua.
San Luis Potosi	June 13-26		7	
Do	July 4-31		7	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Do	July 1-31		5	
Nigeria				Feb 1-Mar. 31, 1926. Cases, 270; deaths, 12.
Peru				
Arequipa	June 1-30		1	
Poland				Mar. 28-May, 1926; Cases, 12, deaths, 1.
Portugal				
Lisbon	Apr 26-June 19	10	3	
Oporto	May 23-June 5	4		
Do	July 11-17	1		
Russia				Jan. 1-Feb. 28, 1926. Cases, 1,403.
Siam				
Bangkok	May 2-June 12	23	20	
Straits Settlements				
Singapore	Apr. 25-May 1	1		
Switzerland				
Lucerne Canton	June 1-30	1		
Tunisia				Apr 1-May 31, 1926 Cases, 12.
Union of South Africa				
Cape Province	June 20-26			Outbreaks.
Idutya district	May 23-29			Do.
Orange Free State	June 20-26			Do.
Natal	May 30-June 5			Do
Transvaal				June 6-12, 1926. Outbreaks in Pietersburg and Rustenburg Districts
Johannesburg	May 9-June 12	5		
Yugoslavia				Apr. 15-30, 1926, Cases, 2; deaths, 1.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 20, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
On vessel				Three cases, 1 death, at Aden, Arabia, stated to have been imported by sea
S S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed At Durban, Union of South Africa, June 16, 1926 One suspect case landed

TYPHUS FEVER

Algeria				
Algiers	May 21-June 30	7	1	
Argentina				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Bulgaria				Mar 1-Apr 30, 1926. Cases, 64; deaths, 12
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Valparaiso	Apr 29-May 5		1	
China				
Antung	June 14-27	7	1	
Do	June 28-July 4	4		
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1-Mar 31, 1926 Cases, 446; deaths, 47
Chemulpo	May 1-31	28	1	
Czechoslovakia				Jan 1-Apr 30, 1926 Cases, 148; deaths, 4
Egypt				
Port Said	June 4-24	4	1	
Cairo	Jan 29-Feb 18	8	4	
Great Britain.				
Scotland—				
Glasgow		7		Reported Aug 3, 1926
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerry County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-May 8, 1926 Cases, 3.
Japan				Mar 28-May 1, 1926 Cases, 24.
Lithuania				Mar 1-Apr 30, 1926 Cases, 106, deaths, 13.
Mexico				Feb 1-Mar 31, 1926 Deaths, 73.
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal District
Do	June 13-19	9		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-Apr 30, 1926 Cases, 299.
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces
Gaza	July 6-12	1		
Jaffa District	June 15-28	5		
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar. 28-May 29, 1926 Cases, 1,061, deaths, 76
Rumania				Mar 1-31, 1926. Cases, 41
Russia				Jan 1-Feb 28, 1926 Cases, 9,870.
Tunisia				Apr 1-May 31, 1926 Cases, 94.
Tunis	June 11-30	3		
Turkey				
Constantinople	June 16-22	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 20, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths 19
Cape Province				Apr 1-May 31, 1926 Cases, 116, deaths 15 Native
Do	May 31-June 12			Outbreaks
Grahamstown	do	1		Sporadic
Natal				Apr 1-May 31, 1926, Cases, 17 Native
Orange Free State				Apr 1-May 31, 1926, Cases, 15, deaths, 1
Do	June 6-12			Outbreaks
Transvaal				Apr 1-30 1926 Cases, 3, deaths, 3 Native
Walkkerstroom district	June 20-26			Outbreaks
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 48, deaths, 7
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-29	4	3	
Do	June 6-19	4	3	

TREASURY DEPARTMENT

PUBLIC HEALTH REPORTS

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SPECIAL ARTICLES

Establishments Licensed for Biological Products

Endemic Goiter and Physical Development in Children

WASHINGTON
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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg. Gen. B. J LLOYD, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912.

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PUBLIC HEALTH REPORTS

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BIOLOGICAL PRODUCTS

ESTABLISHMENTS LICENSED FOR THE PROPAGATION AND SALE OF VIRUSES, SERUMS, TOXINS, AND ANALOGOUS PRODUCTS

There is presented below a list of the establishments holding licenses issued by the Treasury Department in accordance with the act of Congress approved July 1, 1902, entitled "An act to regulate the sale of viruses, serums, toxins, and analogous products in the District of Columbia, to regulate interstate traffic in said articles, and for other purposes."

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The enumeration of the products is as follows: Serums are placed first, the antitoxins, being more important, heading the list. The other products are arranged generally in the order of their origin. The items in each class are arranged alphabetically.

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Parke, Davis & Co , Detroit, Mich —License No 1

Diphtheria antitoxin; scarlet fever streptococcus antitoxin, tetanus antitoxin, antianthrax serum; antidysenteric serum, antigonococcic serum, antimeningococcic serum, antipneumococcic serum, antistreptococcic serum, hemostatic serum (Lapenta), normal horse serum, thyroidectomized horse serum vaccine virus; rabies vaccine (Cumming), tuberculin old; tuberculin T R ; tuberculin B. E ; tuberculin B. F.; bacterial vaccines made from acne bacillus, acne diplococcus, colon bacillus, Friedländer bacillus, gonococcus, influenza bacillus, meningococcus, micrococcus catarrhalis, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, pneumococcus, prodigiosus bacillus, pseud.

diphtheria bacillus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus; diphtheria toxin-antitoxin mixture, diphtheria toxin for Schick test, scarlet fever streptococcus toxin for Dick test, scarlet fever streptococcus toxin for immunization, animal [illegible] extract, animal food extract, vegetable food extract, pollen extract, modified bacterial [illegible] made from colon bacillus, gonococcus, paratyphoid bacillus A, paratyphoid bacillus B, pneumococcus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus, [illegible] made from gonococcus, pertussis bacillus, pneumococcus, staphylococcus albus, staphylococcus aureus, and streptococcus.

H. K. Mulford Co., Philadelphia, Pa.—License No. 2:

Diphtheria antitoxin, erysipelas streptococcus antitoxin, perfringens antitoxin; scarlet fever streptococcus antitoxin, tetanus antitoxin, antianthrax serum, antidysenteric serum, antigonococcic serum; antimelitensis serum, antimeningococcic serum, antipneumococcic serum; antistreptococcic serum; normal horse serum, vaccine virus, rabies vaccine (Pasteur), rabies vaccine (killed virus), tuberculin old, tuberculin T. R., tuberculin B. E., tuberculin B. F., tuberculin protein free (Lyons); bacterial vaccines made from acne bacillus, cholera vibrio, colon bacillus, dysentery bacillus, Friedländer bacillus, gonococcus, influenza bacillus, meningococcus, micrococcus catarrhalis, micrococcus melitensis, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, plague bacillus, pneumococcus, pseudodiphtheria bacillus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus, sensitized bacterial vaccines made from acne bacillus, cholera vibrio, colon bacillus, Friedländer bacillus, gonococcus, influenza bacillus, meningococcus, micrococcus catarrhalis, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, pneumococcus, pseudodiphtheria bacillus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus, diphtheria toxin-antitoxin mixture, diphtheria toxin for Schick test, scarlet fever streptococcus toxin for Dick test, scarlet fever streptococcus toxin for immunization, pollen extract, animal epidermal extract, animal food extract, vegetable food extract, poison ivy extract, pneumococcus antibody solution.

Slee Laboratories, Swiftwater, Pa.—License No. 6:

Diphtheria antitoxin, tetanus antitoxin, normal horse serum; vaccine virus, bacterial vaccines made from colon bacillus, gonococcus, paratyphoid bacillus A, paratyphoid bacillus B, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus.

The Cutter Laboratory, Berkeley, Calif.—License No. 8:

Diphtheria antitoxin, tetanus antitoxin, antistreptococcic serum, normal horse serum, vaccine virus, rabies vaccine (Pasteur), rabies vaccine (killed virus); tuberculin old, tuberculin B. F.; bacterial vaccines made from acne bacillus, colon bacillus, Friedländer bacillus, gonococcus, influenza bacillus, micrococcus catarrhalis, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, pneumococcus, pseudodiphtheria bacillus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus; diphtheria toxin-antitoxin mixture, diphtheria toxin for Schick test, pollen extract.

Bureau of Laboratories, Department of Health, New York City—License No. 11:

Diptheria antitoxin, scarlet fever streptococcus antitoxin, tetanus antitoxin; antimeningococcic serum; antipneumococcic serum, normal horse serum, vaccine virus, rabies vaccine (Pasteur); tuberculin old, bacterial vaccines made from gonococcus, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, pneumococcus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus, diphtheria toxin-antitoxin mixture, diphtheria toxin for Schick test.

Lederle Antitoxin Laboratories, Pearl River, N. Y.—License No. 17:

Diphtheria antitoxin; scarlet fever streptococcus antitoxin; tetanus antitoxin; antianthrax serum; antidysenteric serum, antigonococcic serum, antimeningococcic serum, antipneumococcic serum; antistreptococcic serum, measles immune serum; normal horse serum, vaccine virus, rabies vaccine (Pasteur); rabies vaccine (killed virus); tuberculin old; tuberculin B. E.; tuberculin B. F.; bacterial vaccines made from acne bacillus, cholera vibrio, colon bacillus, Friedländer bacillus, gonococcus, influenza bacillus, meningococcus, micrococcus catarrhalis, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, plague bacillus, pneumococcus, pseudodiphtheria bacillus, staphylococcus albus, staphylococcus aureus, staphylococcus citreus, streptococcus, and typhoid bacillus; diphtheria toxin-antitoxin mixture; pollen extract, poison ivy extract, poison oak extract; diphtheria toxin for Schick test; scarlet fever streptococcus toxin for Dick test, scarlet fever streptococcus toxin for immunization.

Bacterio-Therapeutic Laboratory, Asheville, N. C.—License No. 23:

Watery extract of tubercle bacilli (von Ruck), modified tubercle bacillus derivative (von Ruck).

G. H. Sherman, M. D., Inc., East Jefferson Avenue, Detroit, Mich.—License No. 30:

Bacterial vaccines made from acne bacillus, colon bacillus, Friedländer bacillus, gonococcus, influenza bacillus, meningococcus, micrococcus catarrhalis, nonvirulent tubercle bacillus, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, pneumococcus, pseudodiphtheria bacillus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus; pollen extract.

The Abbott Laboratories, North Chicago, Ill.—License No. 43:

Bacterial vaccines made from acne bacillus, colon bacillus, Friedländer bacillus, gonococcus, influenza bacillus, micrococcus catarrhalis, pertussis bacillus, pneumococcus, pseudodiphtheria bacillus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus; pollen extract.

Dr W T McDougall, 422 Brotherhood Building, Eighth and Minnesota Avenue, Kansas City, Kans.—License No 49
Rabies vaccine (Pasteur)

St Louis Pasteur Institute, 3514 Lucas Avenue, St Louis, Mo —License No 50
Rabies vaccine (dilution method).

The Upjohn Co, Kalamazoo, Mich – License No 51
Bacterial vaccines made from colon bacillus, gonococcus, influenza bacillus, micrococcus catarrhalis, paratyphoid bacillus A, paratyphoid bacillus B, pneumococcus, pseudodiphtheria bacillus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus, pollen extract

E. R Squibb & Sons' Research and Biological Laboratories, New Brunswick, N J —License No 52·
Diphtheria antitoxin, erysipelas streptococcus antitoxin, scarlet fever streptococcus antitoxin, tetanus antitoxin, antimeningococcic serum, antipneumococcic serum; antistreptococcic serum, normal horse serum, vaccine virus; rabies vaccine (Pasteur), rabies vaccine (killed virus), bacterial vaccines made from acne bacillus, colon bacillus, Friedländer bacillus, gonococcus, influenza bacillus, meningococcus, micrococcus catarrhalis, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, pneumococcus, pseudodiphtheria bacillus, staphylococcus albus, staphylococcus aureus, staphylococcus citreus, streptococcus, and typhoid bacillus, leucocytic extract from the horse, diphtheria toxin antitoxin mixture, diphtheria toxin for Schick test, scarlet fever streptococcus toxin for Dick test, scarlet fever streptococcus toxin for immunization, pollen extract, arsphenamine, neoarsphenamine, sodium arsphenamine, sulpharsphenamine, solution of arsphenamine

Dr James McL Phillips, 2057 North High Street, Columbus, Ohio —License No 54
Rabies vaccine (dilution method)

Eli Lilly & Co, Indianapolis, Ind —License No 56
Diphtheria antitoxin, erysipelas streptococcus antitoxin, scarlet fever streptococcus antitoxin, tetanus antitoxin, antimeningococcic serum, antistreptococcic serum, normal horse serum, vaccine virus, rabies vaccine (Harris), tuberculin old tuberculin T. R, tuberculin B E, tuberculin B F, bacterial vaccines made from acne bacillus, cholera vibrio, colon bacillus, Friedländer bacillus, gonococcus, influenza bacillus, meningococcus, micrococcus catarrhalis, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, plague bacillus, pneumococcus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus, diphtheria toxin-antitoxin mixture, diphtheria toxin for Schick test

Swan Myers Co, 219 North Senate Avenue, Indianapolis, Ind – License No 58
Bacterial vaccines made from acne bacillus, colon bacillus, Friedländer bacillus, gonococcus, influenza bacillus, micrococcus catarrhalis, micrococcus tetragenus, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, pneumococcus, pseudodiphtheria bacillus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus, pollen extract, scarlet fever streptococcus toxin for Dick test, scarlet fever streptococcus toxin for immunization

Gilliland Laboratories, Marietta, Pa —License No 63
Diphtheria antitoxin, scarlet fever streptococcus antitoxin, tetanus antitoxin, antimeningococcic serum antipneumococcic serum; antistreptococcic serum, normal horse serum, vaccine virus, rabies vaccine (Pasteur), tuberculin old, tuberculin B E, tuberculin B F, bacterial vaccines made from acne bacillus, gonococcus, influenza bacillus, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, pneumococcus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus, diphtheria toxin antitoxin mixture; diphtheria toxin for Schick test

Antitoxin and Vaccine Laboratory, Department of Public Health, Commonwealth of Massachusetts, Jamaica Plain, Boston 30, Mass – License No 64
Diphtheria antitoxin; scarlet fever streptococcus antitoxin, antimeningococcus serum, antipneumococcus serum, vaccine virus, bacterial vaccines made from paratyphoid bacillus A, paratyphoid bacillus B, and typhoid bacillus, diphtheria toxin-antitoxin mixture; diphtheria toxin for Schick test.

United States Standard Products Co, Woodworth, Wis. –License No 65
Diphtheria antitoxin, scarlet fever streptococcus antitoxin, tetanus antitoxin; normal horse serum; bacterial vaccines made from acne bacillus, colon bacillus, gonococcus, influenza bacillus, micrococcus catarrhalis, paratyphoid bacillus A, paratyphoid, bacillus B, pertussis bacillus, pneumococcus, pseudodiphtheria bacillus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus, diphtheria toxin-antitoxin mixture; diphtheria toxin for Schick test, scarlet fever streptococcus toxin for Dick test, scarlet fever streptococcus toxin for immunization.

D. L. Harris Laboratories, Metropolitan Building, St. Louis, Mo.—License No 66.
Rabies vaccine (Harris).

The Arlington Chemical Co, Yonkers, N Y.—License No 67·
Bacterial vaccines made from colon bacillus, micrococcus tetragenus, pneumococcus, staphylococcus albus, staphylococcus aureus, staphylococcus citreus, streptococcus, pollen extract, animal epidermal extract; animal food extract, vegetable food extract

Dermatological Research Laboratories, Philadelphia, Pa. (branch of Abbott Laboratories, Chicago, Ill.)—License No. 68:
Arsphenamine; neoarsphenamine; sulpharsphenamine; bismuth arsphenamine sulphonate.

H. A. Metz Laboratories, 122 Hudson Street, New York City – License No 69.
Arsphenamine; neoarsphenamine, sodium arsphenamine; silver arsphenamine, neosilver arsphenamine; sulpharsphenamine.

Synthetic Drugs and Diarsenol Laboratories, Buffalo, N. Y.—License No. 70:
Arsphenamine, neoarsphenamine, solution arsphenamine, sulpharsphenamine.
Hanson, Westcott & Dunning, Baltimore, Md.—License No. 76:
Suspension of arsphenamine, suspension of neoarsphenamine.
Mallinckrodt Chemical Works, St. Louis, Mo.—License No. 77:
Arsphenamine, neoarsphenamine, sulpharsphenamine.
Agricultural Experiment Station, College of Agriculture, University of Illinois, Urbana, Ill.—License No. [illegible]:
Botulinus antitoxin.
Powers-Weightman-Rosengarten Co., Philadelphia, Pa.—License No. [illegible]:
Arsphenamine, neoarsphenamine, sulpharsphenamine, compound of [illegible] with arsphenamine base.
Terrell Laboratories, Texas National Bank Building, Fort Worth, Tex.—License No. 81:
Rabies vaccine (killed virus).
Jensen-Salsbury Laboratories, Kansas City, Mo.—License No. 85:
Botulinus antitoxin, rabies vaccine (killed virus).
Cook Laboratories, [illegible] Lake Shore Drive, Chicago, Ill.—License No. 86:
Bacterial vaccines made from acne bacillus, colon bacillus, Friedlander bacillus, gonococcus, influenza bacillus, micrococcus catarrhalis, paratyphoid bacillus A, paratyphoid bacillus B, pertussis bacillus, pneumococcus, staphylococcus albus, staphylococcus aureus, streptococcus, and typhoid bacillus; diphtheria toxin-antitoxin mixture.
The Neosol Co., 7[illegible] Kingsley St., Buffalo, N. Y.—License No. 90:
Solution of neoarsphenamine, solution of sulpharsphenamine.
Hollister-Stier Laboratories, 312 Old National Bank Bldg., Spokane, Washington.—License No. 91: Pollen extract.
DePree Laboratories, Holland, Michigan.—License No. 93:
Arsphenamine, neoarsphenamine.
The Jackson Infirmary, Jackson, Mississippi.—License No. 96:
Rabies vaccine (Pasteur), rabies vaccine (killed virus).
Medical Arts Laboratory, Medical Arts Bldg., Oklahoma City, Oklahoma.—License No. 98:
Rabies vaccine (killed virus).
Bureau of Laboratories, Department of Health, Lansing, Mich.—License No. 99:
Diphtheria antitoxin; bacterial vaccine made from paratyphoid bacillus A, paratyphoid bacillus B, and typhoid bacillus; diphtheria toxin-antitoxin mixture; diphtheria toxin for Schick test; scarlet fever streptococcus toxin for Dick test; scarlet fever streptococcus toxin for immunization.

FOREIGN ESTABLISHMENTS

Institut Pasteur de Paris, Paris, France.—License No. 11. Selling agents for the United States: Pasteur Laboratories of America, 366 West Eleventh Street, New York City:
Diphtheria antitoxin; tetanus antitoxin; antianthrax serum; antidysenteric serum, antiplague serum; antistreptococcic serum; bacterial vaccines made from cholera vibrio, plague bacillus, staphylococcus albus, and staphylococcus aureus.
Farbwerke Hoechst, vorm. Meister Lucius und Brüning, Hoechst am Main, Germany.—License No. 24. Selling agents for the United States: H. A. Metz Laboratories, 122 Hudson St., New York City.
Diphtheria antitoxin; tetanus antitoxin, antistreptococcic serum, normal horse serum, tuberculin old; tuberculin T. R.; tuberculin B. E.; tuberculin B. F.; bacterial vaccines made from cholera vibrio, gonococcus, staphylococcus albus, staphylococcus aureus, and staphylococcus citreus, typhoid bacillus; sensitized bacterial vaccine made from typhoid bacillus; arsphenamine; neoarsphenamine, sodium arsphenamine; silver arsphenamine; neosilverarsphenamine; sulphoxylarsphenamine.
E. Merck, Darmstadt, Germany.—License No. 31. Selling agents for the United States: Merck & Co., 45-47 Park Place, New York City: Tuberculin Ointment (Moro).
Connaught Antitoxin Laboratory, University of Toronto, Canada.—License No. 73:
Diphtheria antitoxin; tetanus antitoxin.
Les Etablissements Poulenc Frères, 92 Rue Vieille-du-Temple, Paris, III, France.—License No. 74. Selling agents for the United States: Geo. J. Wallau, 6 Cliff St., New York City:
Bacterial vaccines made from gonococcus, micrococcus tetragenus, pertussis bacillus, staphylococcus albus, staphylococcus aureus, and synococcus.
Laboratoire de Biochimie Médicale, 92 Rue Michel-Ange, Paris, France.—License No. 83. Selling agents for the United States: Anglo-French Drug Co., 1270 Broadway, New York City. Selling agents for Porto Rico: Chas. Vere, Box 216, San Juan, P. R.: Sulpharsphenamine.
Instituto Sieroterapico Milanese, Milan, Italy.—License No. 87. Selling agents for the United States, Neother Products Co., 50 Union Square, New York City: Antianthrax serum; bacterial vaccines made from gonococcus, pneumococcus, staphylococcus albus, staphylococcus aureus, staphylococcus citreus, and streptococcus; neoarsphenamine.
Boots Pure Drug Co., Ltd., Nottingham, England.—License No. 92. Selling agents for the United States: The United Drug Co., 43 Leon Street, Boston, Massachusetts: Arsphenamine diglucoside.
Etablissements Mouneyrat, Villaneuve-la-Garenne, Seine, France.—License No. 94. Selling agents for the United States: G. J. Wallau, 6 Cliff Street, New York City: Phospharsphenamine.

Institut National de Vaccinothérapie, 26 Rue Pages, Suresnes (Seine), near Paris, France —License No 95.
Selling agents for the United States Lee S Smith Manufacturing Co, Pittsburgh, Pa Bacterial vaccines made from colon bacillus, enterococcus, Friedländer bacillus, micrococcus catarrhalis, micrococcus tetragenus, pneumococcus, staphylococcus albus, staphylococcus aureus, and streptococcus.

Behringswerke, A. G., Marburg-am-Lahn, Germany —License No 97
Bacterial vaccines made from gonococcus, staphylococcus albus, and staphylococcus aureus.

ENDEMIC GOITER AND PHYSICAL DEVELOPMENT

I. IN CINCINNATI SCHOOL CHILDREN *

By Robert Olesen, Surgeon, and Neil E Taylor, Acting Assistant Surgeon, United States Public Health Service

INTRODUCTION

While the literature dealing with goiter is voluminous, references to the effects of the endemic type, as it is encountered in the United States, are relatively few and often unconvincing The etiology, pathology, physiology, distribution, and more recently the prevention of endemic goiter have all received marked attention At the same time it has seemingly been taken for granted that the manifestations of the affection are so obvious as to require neither recounting nor study

It has been asserted that endemic goiter is responsible for interference with nutrition and consequently with retardation of normal physical growth. In all probability such impressions have been intensified by contact with and study of simple goiter in regions of marked endemicity, where cretinism, myxedema, and deaf mutism are much more frequent than they are in this country Nevertheless the subject is a vital one and manifestly requires investigation and study before a conclusion can be reached as to the influence of simple goiter upon the physical development of adolescent boys and girls in the United States.

Function of thyroid in regulating growth.—The action of the thyroid gland in regulating metabolism has aptly been compared to the part played by the governor of an engine or the hairspring of a watch. The thyroid apparatus elaborates its secretion from raw materials in food and drink, being subject to constant call from the processes which regulate growth and govern regular bodily function. Presumably development proceeds normally when ample iodine is available and the thyroid is functioning efficiently

Trend of opinion in literature.—Many writers maintain that disturbance of thyroid function, such as occurs in well marked endemic goiter, hampers both mental and physical development. Not only

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* Editorial Note —It should be borne in mind that the present study was limited to a single locality, having a moderate incidence of endemic goiter. (Compared with regions of marked endemicity, such as Switzerland, Austria, and Northern India, Cincinnati may be regarded as having only a slight incidence of goiter.) Therefore, the findings can not be accepted as being representative of all portions of the United States. By making further studies it will be possible to ascertain the effects upon physical development in areas of slight and marked goiter prevalence.

is the nutrition of the body disturbed, in their opinion, but growth and physical development are likewise seriously hampered. Moreover, the children affected are said to be below the standard of health and development, look frail, and become fatigued easily. There are a number of noteworthy features peculiar to most of the references relating to endemic goiter and physical growth:

1. There is a marked similarity in the references, suggesting that the statements were obtained from a common source.
2. There is a lack of evidence in support of the statements made.
3. There is no mention at any time of the size of the goiter; the blanket statements of deleterious effects cover all thyroid enlargements from the smallest to the largest.
4. No references are made at any time to locality, to incidence, mildness or severity of goiter, in so far as the goitrous conditions are encountered in the United States. There are, of course, numerous allusions to the severity of goiter and its sequelae in regions of great endemicity in foreign countries. However, goiter and its manifestations in the United States are less intense than in certain other countries and therefore the data are not strictly comparable.

Endemic goiter and overheight.—Despite the numerous contentions that growth is retarded by endemic goiter there is considerable evidence to show that height is actually increased in the presence of this malady. Comparisons of physical measurements in cases of colloid goiter by Hill, Brett, and Smith [1], with the average standards for height and weight, showed that a large majority were above height for age. Examinations of drafted men in the United States showed that tall men were particularly prone to goiter, both simple and exophthalmic [2].

Between these varying and often unsupported contentions regarding the influence of endemic goiter upon physical development there is apparently considerable opportunity for research having for its purpose the determination of the true status of the maladjusted thyroid in relation to growth. Particularly is it necessary that conclusions regarding this relationship in the United States be untinged by experiences in Switzerland, Austria, India, and other countries in which simple goiter is known to be responsible for such marked manifestations as cretinism, mutism, and idiocy.

METHOD OF SECURING DATA

In the present study the physical development of thyroid-normal and thyroid-enlarged children were compared by means of estimates and actual measurements. In securing the requisite data, use was

[1] E. Gardiner-Hill, P. O. Brett, and J. Forest-Smith. Adolescent Goiter. Some Factors of Significance. Quarterly Journal of Medicine, Oxford, 18, 133, January, 1925.

[2] Army Anthropology. The Medical Department of the United States Army in the World War, Vol. 15, Statistics, Part 1.

made of a form[3] devised by the child hygiene section of the Public Health Service. This form has the advantage of simplicity and yet provides ample information for comparative study. In order to insure uniformity of results, all data were obtained and recorded in a like manner by physicians experienced in work of this character. The "instructions for making physical examinations of children," also prepared by the child hygiene section of the Public Health Service, served as the guide for obtaining the various measurements and estimates.

The estimates made during the course of the study included opinions regarding nutrition and posture. Ten uniform measurements were made of each child, as follows. Standing height, sitting height, weight, chest circumference, chest width, chest depth, vital capacity, head length, head breadth, and head height.

Two thousand nine hundred and seventeen white children were included in the investigation. Of this number 1,341 were boys and 1,576 were girls. The ages of most of the children ranged between 11 and 15 years, during which period thyroid enlargement is very likely to be present, though not to the extent which prevails just after this period. In determining the degrees of thyroid enlargement the standards and classification developed during the Cincinnati survey[4] were followed.

In order to insure representative conditions the children examined were chosen from schools located in different parts of the city. Thus, 3 of the schools were located in the poorer sections of the community, 2 in sections of moderate economic status, and 1 in the best section of the city. In addition there was 1 vocational school, attended largely by part-time girl workers, and 1 junior high school.

In the six elementary schools visited the children examined attended the fifth, sixth, seventh, and eighth grades. In the vocational and junior high schools most of the children were older and attended higher grades. By this means of selection a cross section of the elementary-school population was obtained. Moreover, this cross section was representative of various school ages, grades, sections of the city, environment, and social status.

THE RESULTS

In the following section the results of the physical measurements of children with or without enlargement of the thyroid gland will be set forth by means of comparative tabulations and brief explanation.

Thyroid enlargement.—In Table 1 are displayed the number and percentage of each degree of thyroid enlargement among the 1,341 white boys and 1,576 white girls included in the study, according to

[3] Form 14.

[4] Robert Olesen: Thyroid Survey of 47,493 Elementary-School Children in Cincinnati. Pub. Health Rep., vol 39, No. 30, July 25, 1924, pp. 1777-1802. (Reprint No 941.)

age. Among the boys there were 515 instances of thyroid enlargement, a percentage of 38.4. A greater number of enlargements, 927, or 58.8 per cent, were recorded among the girls. Owing to the comparatively small number of some of the degrees of thyroid enlargement it was found desirable, for statistical purposes, to reduce the five degrees of enlargement, recorded during the examinations, to three. Thus, the "very slight" and "slight" enlargements were combined and termed "slight." "Moderate" involvement was allowed to stand. "Marked" and "very marked" thickenings were combined and called "marked." In making the various comparisons of measurements all degrees of thyroid enlargement were combined under a single heading. By far the greatest number of enlargements so included were of the slight variety.

TABLE 1.—*Number and percentage of each degree of thyroid enlargement among 1,341 white boys and 1,576 white girls in the Cincinnati public schools, for all ages and for each age between 11 and 15 years*

NUMBER OF CHILDREN

Thyroid status	Age											
	All ages		11		12		13		14		15	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Total	1,341	1,576	155	156	217	229	273	256	305	331	254	426
Normal	826	649	85	65	136	101	159	102	185	139	169	145
Enlarged	515	927	70	91	81	128	114	154	120	192	85	271
Slight	498	794	68	84	81	121	110	139	116	157	79	217
Moderate	14	109	2	7	0	6	3	11	4	25	4	46
Marked	3	24	0	0	0	1	1	4	0	10	2	8

PERCENTAGE OF CHILDREN

Thyroid status	All ages Boys	All ages Girls	11 Boys	11 Girls	12 Boys	12 Girls	13 Boys	13 Girls	14 Boys	14 Girls	15 Boys	15 Girls
Total	100.0	100.0	11.6	9.9	16.7	14.5	20.3	16.2	22.7	21.0	18.9	27.1
Normal	100.0	100.0	10.3	10.1	16.5	15.6	19.2	15.7	22.4	21.5	20.4	22.4
Enlarged	100.0	100.0	13.6	9.8	15.7	13.8	22.1	16.6	23.3	20.7	16.5	29.3
Slight	100.0	100.0	13.6	10.6	16.3	15.2	22.1	17.5	23.4	19.8	15.9	27.3
Moderate	100.0	100.0	14.3	6.4	0	5.5	21.6	10.1	28.6	22.9	28.6	42.2
Marked	100.0	100.0	0	0	0	4.2	33.3	16.7	0	41.7	66.6	33.4

The number and percentage of each degree of thyroid enlargement at each age between 11 and 15 years, as well as for all ages combined, are also shown in Table 1. It will be seen that slight enlargements were more frequent among the girls—50.4 per cent, as against 37.2 per cent for the boys. Moderate and marked enlargements were approximately eight times more commonly encountered among the girls.

Relation of degree of thyroid enlargement to symptomatology.—Inasmuch as thyroid enlargements of marked degree are commonly supposed to exert more positive and decided influences than do slight enlargements, a word of explanation appears desirable at this point.

Probably the following explanation of Bram [5] covers this point most satisfactorily:

Assuming that reference is had to so-called simple or nontoxic goiter, situated in the usual position, above the sternum, in persons of noncretinous or nonmyxedematous make-up, and assuming that the thyroid gland is not enlarged to the extent of causing pressure symptoms upon the structures of the neck, I would state that, generally speaking, the size of a thyroid enlargement bears no relation to constitutional disturbances, and that neither stature nor other phases of the economy, structurally or physiologically, appear to be influenced by size of thyroid enlargement This opinion is based upon my 16 years of work with goiter patients, during which more than 9,000 cases were studied. This is an abstract statement, presenting, as all good rules do, frequent exceptions.

Nativity.—The question of racial susceptibility or immunity to goiter is one which has occasioned much conjecture. During the present study the place of birth of each child, and of his parents and grandparents, were carefully recorded. A child whose parents and grandparents, as well as himself, had been born in the United States was termed "native stock." In this way various combinations of birthplaces were noted.

Ninety-three and eight-tenths per cent of the children examined were born in the United States; probably 75 per cent of these were born in the city of Cincinnati or its environs. Of the 826 thyroid-normal boys, 45.3 per cent were of native stock, while 49.3 per cent of the 515 thyroid-enlarged boys were similarly classed. Slightly smaller percentages of girls, 42.5 per cent of the 647 thyroid-normal and 40 per cent of the 927 thyroid-enlarged, were also native stock.

The combinations of parental nativity are shown in Table 2. Among the boys of native stock 59.6 per cent had normal thyroids, while 40.4 per cent had some degree of thyroid enlargement. Compared with the boys of native stock, five of the groups in Table 2 had greater percentages while three groups had smaller percentages of thyroid-normal individuals. Because of their irregularity these tendencies are not particularly significant.

Forty-two and six-tenths per cent of the girls of native stock had normal thyroids and 57.4 per cent had some degree of thyroid enlargement. When the percentage of thyroid-normal girls of native stock is compared with the remaining groups in Table 2 it is apparent that there are smaller percentages of the same type in seven of the eight remaining groups. While the number of girls included in the present study is entirely too small to serve for the drawing of general conclusions, the data at least suggest that there is less thyroid enlargement among the native-born girls. However, much additional evidence is needed to strengthen this assumption.

Heretofore it has been widely believed that the nativity of parents and grandparents has had little to do with the presence or absence

[5] Dr. Israel Bram, Philadelphia, personal communication, May 7, 1926

of goiter in the child, provided the family has resided in a community sufficiently long to have suffered the iodine deprivation necessary to induce thyroid enlargement. However, additional information on this point is obviously required before the belief can be accepted as fact.

TABLE 2. *Number of children in certain groups based on nativity of child, parents, and grandparents, and number and percentage of thyroid-normal and thyroid-enlarged in each group*

BOYS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Total
Total number in group	626	132	193	63	93	34	129	27	44	1,341
Number thyroid-normal	373	77	117	42	64	19	89	20	25	826
Number thyroid-enlarged	253	55	76	21	29	15	40	7	19	515
Per cent normal	59.6	58.3	60.6	66.6	68.8	55.9	69.0	74.1	56.8	61.6
Per cent enlarged	40.4	41.7	39.4	33.4	31.2	44.1	31.0	25.9	43.2	38.4

GIRLS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Total
Total number in group	647	168	236	95	123	42	155	33	77	1,576
Number thyroid normal	276	77	99	37	44	12	60	12	32	649
Number thyroid enlarged	371	91	137	58	79	30	95	21	45	927
Per cent normal	42.6	45.8	41.9	39.0	35.8	28.6	38.7	36.4	41.6	41.2
Per cent enlarged	57.4	54.2	58.1	61.0	64.2	71.4	61.3	63.6	58.4	58.8

Explanation:
(1) Native born (child, both parents, and 4 grandparents born in United States).
(2) Child, both parents, and 3 grandparents born in United States.
(3) Child, both parents, and 2 grandparents born in United States.
(4) Child, both parents, and 1 grandparent born in United States.
(5) Child and both parents born in United States.
(6) Child and 1 parent born in United States.
(7) Child born in United States, parents and grandparents born elsewhere.
(8) Child, both parents, and 4 grandparents born outside of United States.
(9) All other combinations of nativity.

Estimates of development and posture.—In judging development or nutrition the existing standards of height and weight were not considered. Instead, emphasis was placed on general appearance, condition of the skin, amount of subcutaneous fat, muscle tone, alertness, and vitality. During the examinations nutrition was classed as excellent, good, fair, and poor. It was found, however, that most of the estimates fell in the good and fair classes, few notations being entered in the extreme upper and lower groups. Consequently the numbers with excellent and good nutrition were combined, as were those with fair and poor nutrition. Similarly combinations of types of posture and physical build were also found to facilitate statistical interpretation.

Nutrition.—The percentages of good and fair types of nutrition among the children examined are displayed in Table 3. So far as the examiners were able to estimate, the nutrition of those with normal thyroids was consistently and considerably better than those with enlarged thyroids. Thus, 80.8 per cent of the thyroid-normal boys and 81.8 per cent of the thyroid-normal girls had good physical development, while 70.1 per cent of the thyroid-enlarged boys and

79 per cent of the thyroid-enlarged girls had the same state of nutrition. The same superiority among the thyroid-normal individuals, though slight in some instances, is also apparent in the separate age groups, with the exception of he 15-year old boys and the 11-year old girls.

TABLE 3.—*Percentage of good and fair states of nutrition of 1,204 white boys and 1,308 white girls in the Cincinnati public schools, at each age between 11 and 15 years, and according to presence or absence of thyroid enlargement*

Age	Thyroid status	Boys			Girls		
		State of nutrition			State of nutrition		
		Good	Fair	Number of observations	Good	Fair	Number of observations
11	Thyroid normal	78.9	21.1	85	66.2	33.8	66
	Thyroid enlarged	72.9	27.1	70	72.5	27.5	91
12	Thyroid normal	75.8	24.2	136	78.2	21.8	101
	Thyroid enlarged	60.5	39.5	81	71.9	28.1	128
13	Thyroid normal	78.6	21.4	159	82.4	17.6	102
	Thyroid enlarged	66.6	33.4	114	72.7	27.3	154
14	Thyroid normal	84.3	15.7	185	94.3	5.7	139
	Thyroid enlarged	71.6	28.4	120	81.8	18.2	192
15	Thyroid normal	84.6	15.4	169	90.3	9.7	155
	Thyroid enlarged	85.9	14.1	85	83.8	16.2	271
All ages	Thyroid normal	80.8	19.2	826	81.8	18.2	649
	Thyroid enlarged	70.1	29.9	515	79.0	21.0	937

TABLE 4.—*Percentage of good, fair, and poor types of posture of 1,204 white boys and 1,308 white girls in the Cincinnati public schools, at each age between 11 and 15 years, and according to presence or absence of thyroid enlargement*

Age	Thyroid status	Boys				Girls			
		Type of posture				Type of posture			
		Good	Fair	Poor	Number of observations	Good	Fair	Poor	Number of observations
11	Thyroid normal	45.9	45.9	8.2	85	49.2	38.5	12.3	65
	Thyroid enlarged	42.9	48.5	8.6	70	46.2	41.7	12.1	91
12	Thyroid normal	48.5	45.6	5.9	136	53.5	33.6	12.9	101
	Thyroid enlarged	38.3	53.0	8.7	81	46.1	43.8	10.1	128
13	Thyroid normal	54.1	38.4	7.5	159	45.8	38.3	5.9	102
	Thyroid enlarged	49.1	42.1	8.8	114	38.3	51.3	10.4	154
14	Thyroid normal	53.5	39.5	7.0	185	53.2	37.5	9.3	139
	Thyroid enlarged	45.0	44.2	10.8	120	46.8	36.0	17.2	192
15	Thyroid normal	49.1	43.8	7.1	169	52.9	31.6	15.5	155
	Thyroid enlarged	52.9	35.3	11.8	85	39.5	36.2	24.3	271
All ages	Thyroid normal	51.0	42.0	7.0	826	51.0	37.0	12.0	649
	Thyroid enlarged	45.2	45.2	9.6	515	42.8	41.0	16.2	937

Posture.—The estimates of good, fair, and poor posture among the children examined are shown in Table 4. Good posture is consistently more frequent among both boys and girls of the several age groups who have normal thyroids. Conversely, fair and poor posture are found more frequently among those with thyroid enlargements.

Age-weight-height relationship.—The weight and height index of nutrition is subject to the limitation that the establishment of a practicable standard and norm is not feasible. Furthermore, if such a norm could be established an individual deviation in weight would not necessarily indicate an actual departure from normal health. However, the defects in a nutrition index do not seriously mitigate against the validity of comparisons between children with and without thyroid enlargement. In the present investigation the index of nutrition devised by Drs. B. T. Baldwin and T. D. Wood was used. The standards consist of average weights of children of each sex, by ages and standing height. In the application of this standard a variation of 10 per cent from the average is usually classed as normal, but anything below this point is said to indicate malnutrition. In Table 5 the percentages of those more than 10 per cent overweight and of those more than 10 per cent underweight are shown. These data have been prepared for thyroid-normal and thyroid-enlarged boys and girls of each age between 11 and 15 years and also for all ages combined. An examination of this table shows that overweight is, with a single exception, more frequent among the thyroid-normal boys and girls. The 11-year old boys with thyroid enlargement appear to have a slightly greater percentage of overweight than do those with normal thyroids.

TABLE 5.—*Percentage of thyroid-normal and thyroid-enlarged children who are more than 10 per cent over and percentage of those who are more than 10 per cent under the Baldwin-Wood weight-height-age standards, according to age and sex*

MORE THAN 10 PER CENT OVERWEIGHT

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
All ages	17.0	10.6	21.7	14.7
11	17.7	18.5	12.4	12.[illegible]
12	17.6	9.8	20.7	12.6
13	22.0	4.3	25.5	18.1
14	14.6	9.1	23.1	13.5
15	16.0	15.2	23.2	15.4

MORE THAN 10 PER CENT UNDERWEIGHT

Age	Boys Normal	Boys Enlarged	Girls Normal	Girls Enlarged
All ages	10.9	12.8	19.9	24.6
11	7.0	8.6	15.3	18.7
12	13.9	11.1	21.7	24.1
13	10.7	13.1	27.5	22.1
14	13.5	17.5	18.7	20.2
15	8.9	16.5	14.8	27.4

When average underweight is considered it is apparent that children with normal thyroids are less prone to this condition than are thyroid-enlarged individuals. There are two exceptions to this

statement. Greater percentages of 12-year old boys and 13-year old girls with normal thyroids are underweight than are those of the same age with enlarged thyroid glands.

AVERAGE MEASUREMENTS

In a further attempt to distinguish differences between the physical measurements of children with and without thyroid enlargement some averages have been calculated. Thus, in Tables 6 to 15, inclusive, the average standing height, sitting height, chest circumference, chest depth, chest width, vital capacity, head length, head breadth, and head height are displayed, consecutively. The average measurements are given uniformly in each table according to sex for each age between 11 and 15 years. With the exception of the average standing heights, which have been calculated in inches, and the average weights, which have been calculated in pounds, all of the measurements are in the metric system.

TABLE 6.—*Average standing height, in inches, of 1,204 white boys and 1,398 white girls in the Cincinnati public schools, according to ages between 11 and 15 years and presence or absence of thyroid enlargement*

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
11	55.4	54.2	54.6	56.6
12	57.4	57.1	57.8	58.6
13	59.2	59.3	61.4	60.2
14	61.9	61.5	62.0	62.4
15	63.9	63.9	62.8	63.1

Average standing height.—Inasmuch as several investigators have commented upon the fact that individuals with thyroid enlargement are, on the average, taller than those with normal thyroids, a study of standing and sitting heights of the children included in the Cincinnati study is interesting.

According to Table 6 the advantage in slightly greater height lies with the boys without enlargement of the thyroid, the exception being those in the 13-year group. In the 15-year group the measurements are equal. Therefore, it may be concluded that the comparison of measurements of standing heights among the boys fails to reveal marked differences.

The average standing heights of girls with thyroid enlargement are greater than in those without enlargement, the 13-year group being an exception.

Average sitting height.—Definite differences are apparent when comparisons are made of sitting height or stem length of the children examined (Table 7). The sitting height is consistently greater among

both boys and girls with thyroid enlargement, the single exception being the 11-year old boys.

TABLE 7.—*Average sitting height, in centimeters, of 1,204 white boys and 1,398 white girls in the Cincinnati public schools, according to ages between 11 and 15 years and presence or absence of thyroid enlargement*

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
11	71.6	71.4	71.3	72.4
12	73.2	73.5	74.6	75.4
13	74.9	75.5	77.2	77.4
14	77.8	78.3	79.9	80.2
15	80.5	81.1	80.0	80.8

Average weight.—It is interesting to note in Table 8 that the average weights of girls between 11 and 15 equal or exceed the weights of boys of corresponding ages. When the average weights of thyroid-normal and thyroid-enlarged children are compared it is apparent that those in the former group are consistently heavier. Thyroid-normal boys are, on the average, 5.6 pounds heavier than the thyroid-enlarged boys. All of the thyroid-normal girls are heavier than thyroid-enlarged girls of similar age except in the 11-year group, the average weight superiority of the first named group being 2.4 pounds.

TABLE 8.—*Average weight, in pounds, of 1,204 white boys and 1,398 white girls in the Cincinnati public schools, according to ages between 11 and 15 years, and presence or absence of thyroid enlargement*

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
11	76	70.1	73	81.1
12	86	81.0	87	86.6
13	94	90.2	103	97.8
14	104	98.5	114	106.4
15	117	109.2	117	110.0

The average chest measurements, including circumference, transverse, and antero-posterior measurements, are displayed in Tables 9, 10, and 11. With a few minor exceptions all of the measurements are slightly greater among the children having normal thyroid glands.

Average chest circumference.—An examination of Table 9 shows that the average chest circumferences are slightly greater among the thyroid-normal boys with the exception of those in the 14-year group. Among the girls the average chest circumferences are greater in all of those with normal thyroids except the 11-year group.

TABLE 9.—*Average chest circumference, in centimeters, of 1,204 white boys and 1,398 white girls in the Cincinnati public schools, according to ages between 11 and 15 years, and presence or absence of thyroid enlargement*

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
11	65 7	65 3	64.1	65 5
12	68 3	67 1	67 9	67 5
13	70 2	70 1	72 0	69.3
14	72 6	73.0	74.5	66 5
15	75 8	74 2	74 6	73 1

Average transverse chest measurements.—The average transverse chest measurements are shown in Table 10. These measurements are slightly greater among the thyroid-normal boys. In the 12-year group the measurements are identical among boys with and without involvement of the thyroid. The average transverse chest measurements are slightly greater among all thyroid-normal girls except those of the 11-year group.

TABLE 10.—*Average transverse chest measurement, in centimeters, of 1,204 white boys and 1,398 white girls in the Cincinnati public schools, according to ages between 11 and 15 years, and presence or absence of thyroid enlargement*

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
11	22 2	20 3	21 4	21.8
12	23 0	23 0	22.8	22.7
13	23 8	23 4	24.0	23.6
14	24.8	24.6	24.9	24 4
15	26 1	25 3	25.3	24 8

Antero-posterior chest measurements.—It is apparent from Table 11 that the average antero-posterior chest measurements are slightly greater among thyroid-normal boys and girls with the exception of those in the 11-year group.

TABLE 11.—*Average antero-posterior chest measurement, in centimeters, of 1,204 white boys and 1,398 white girls in the Cincinnati public schools, according to ages between 11 and 15 years, and presence or absence of thyroid enlargement.*

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
11	17.7	18.3	17.1	17.2
12	18.2	18.0	18.5	17.7
13	18 8	18 5	19.0	18.5
14	19.7	19.4	19.9	19.1
15	20.4	20.1	19 9	18.1

Average vital capacity.—The average superiority in vital capacity of boys over girls ranges between 0.1 and 0.6 of a liter. These and other data are shown in Table 12. Among the boys the average vital capacity is very slightly greater among the thyroid-normal individuals in the 12, 14, and 15 year groups, equal in the 13-year group, and less in the 11-year group. Collectively, the average vital capacity is slightly greater among the boys with normal thyroids.

TABLE 12.—*Average vital capacity, in liters, of 1,204 white boys and 1,308 white girls in the Cincinnati public schools, according to ages between 11 and 15 years and presence or absence of thyroid enlargement*

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
11	2.0	2.5	1.9	1.9
12	2.3	2.2	2.1	2.1
13	2.4	2.4	2.3	2.3
14	2.8	2.7	2.6	2.4
15	3.1	3.0	2.5	2.5

The average vital capacity is the same among thyroid-normal and thyroid-enlarged girls of the 11, 12, 13, and 15-year groups. In the 14-year group the average vital capacity is slightly greater among the thyroid-normal girls.

Summarizing, it may be stated that a very slight advantage in increased average vital capacity apparently rests with the thyroid-normal children, a slightly greater advantage being among the boys than among the girls.

Head measurements.—In Tables 13, 14, and 15 average measurements of head length, head breadth, and head height are presented. It will be noted that the head measurements of the boys exceed those of the girls. There are also slight differences in average measurements between thyroid-normal and thyroid-enlarged individuals.

TABLE 13.—*Average head length, in centimeters, of 1,204 white boys and 1,308 white girls in the Cincinnati public schools, according to ages between 11 and 15 years and presence or absence of thyroid enlargement*

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
11	18.1	18.0	17.5	17.5
12	18.0	18.0	17.5	17.9
13	18.1	18.1	18.5	17.7
14	18.3	18.3	17.9	17.9
15	18.4	18.3	17.9	18.0

Average head length.—No significant or uniform differences in average head length was noted between thyroid-normal and thyroid-enlarged boys and girls. (Table 13).

Average head breadth.—The differences in head breadth among boys with normal and those with enlarged thyroids, as shown in Table 14, are at no time marked. However, thyroid-normal boys, except those in the 12-year group, have a slightly greater head breadth than have the individuals with enlarged thyroids.

TABLE 14.—*Average head breadth, in centimeters, of 1,204 white boys and 1,398 white girls in the Cincinnati public schools, according to ages between 11 and 15 years and presence or absence of thyroid enlargement*

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
11	14 5	14 0	14 0	14 1
12	14 4	14 5	14 2	14 3
13	14 5	14 4	14 3	14.2
14	14 5	14 4	14 4	14 3
15	14.6	14 5	14 4	14 3

Among the thyroid-normal girls of the 13, 14, and 15 year groups, the average head breadth is one-tenth of a centimeter greater than among the thyroid-enlarged. In the 11 and 12 year groups the difference just cited is reversed.

Average head height.—In Table 15 it is seen that average head height is slightly greater among the thyroid-enlarged boys. The average head height in each group is the same among the thyroid-normal and thyroid-enlarged girls except in the 12-year group, where it is slightly greater among the latter.

TABLE 15.—*Average head height, in centimeters, of 1,204 white boys and 1,398 white girls in the Cincinnati public schools, according to ages between 11 and 15 years, and presence or absence of thyroid enlargement*

Age	Boys		Girls	
	Thyroid status		Thyroid status	
	Normal	Enlarged	Normal	Enlarged
11	14.3	14.4	13.7	13 7
12	14 1	14.5	13 7	13.9
13	14.1	14 1	13 7	13 7
14	14.2	14 4	13 9	13.9
15	14 2	14.4	13.7	13 7

SUMMARY

1. For the purpose of determining the effect of endemic goiter upon physical development, 1,341 white boys and 1,576 white girls were examined in eight Cincinnati public schools.

2. Five hundred and fifteen, or 38.4 per cent, of the boys had some degree of thyroid enlargement, and 927, or 58.8 per cent, of the girls had such involvements.

3. There were 498 slight, 14 moderate, and 3 marked enlargements among the boys, and 794 slight, 109 moderate, and 24 marked thickenings among the girls. Slight enlargements were one and six-tenths times more frequent among the girls than among the boys. Moderate and marked involvements were approximately eight times more frequent among the girls.

4. Estimates of nutrition and posture, as well as 10 uniform measurements, were made of each child.

5. A record of the birthplace of each child, and of his parents and grandparents was also kept. The data suggest that thyroid enlargement is slightly less frequent among the girls who are native born. The available information on this point among the boys is insufficient for the making of satisfactory deductions.

6. According to the estimates of the examiners, better nutrition and posture were slightly more frequent among thyroid-normal boys and girls.

7. Considerably greater percentages of thyroid-normal children were more than 10 per cent overweight than were thyroid-enlarged individuals. Underweight was more frequent among thyroid-enlarged children.

8. There was little significant difference between the average standing heights of thyroid-normal and thyroid-enlarged boys. The standing heights of thyroid-enlarged girls were greater than those of thyroid-normal girls.

9. Average sitting height was consistently greater among boys and girls with thyroid enlargement.

10. The average weights of thyroid-normal boys and girls were greater than of those having enlarged thyroids.

11. Average chest circumferences, transverse, and antero-posterior chest measurements were slightly greater among children having normal thyroid glands.

12. There were very slight differences in average vital capacities between thyroid-normal and thyroid-enlarged children; the advantage found in this group apparently resting with the former, the greater advantage being with the boys.

13. There were no significant or uniform differences in head length between the thyroid-normal and thyroid-enlarged groups.

14. Thyroid-normal boys, except in the 12-year group, had slightly greater average head breadth than had the thyroid-enlarged. The differences were not marked among the girls.

15. The average head height was slightly greater among the thyroid-enlarged boys. Among the girls there were no significant differences.

COMMENT

In interpreting the results of the present investigation it should be recalled that the measurements and estimates were made in a relatively small group of children in a district of moderate goiter prevalence. Moreover, the majority of the children examined had endemic thyroid enlargements of small size.

Despite obvious limitations, the study has apparently shown that children with normal thyroid glands have a definite superiority in certain physical measurements. Consequently it may be assumed that thyroid-normal children are, to some extent, better developed physically. Thyroid-enlarged children, however, appear to have the advantage of slightly greater height, particularly in the sitting position.

Whether the results of this examination of a relatively small number of children indicate a constant, uniform, and significant difference in physical measurements of normal and thyroid-enlarged individuals can be ascertained only by further and more extensive investigations of similar character. Certainly the findings are suggestive and indicate the need for maintaining a normal thyroid gland lest a retarding influence be exerted upon physical growth.

CURRENT WORLD PREVALENCE OF DISEASE

REVIEW OF THE MONTHLY EPIDEMIOLOGICAL REPORT ISSUED JULY 15, 1926, BY THE HEALTH SECTION OF THE LEAGUE OF NATIONS' SECRETARIAT[1]

During the spring months cholera spread slowly to all parts of the Indo-Chinese peninsula. At the end of May and the beginning of June the incidence of cases was declining in British India, in Siam, and in southern Indo-China, but the disease was still spreading in the upper part of Indo-China, especially in the Province of Tonking and in Kwang-Chow-Wan, according to the data made available in the Epidemiological Report for July 15, 1926, published by the health section of the League of Nations' Secretariat.

Telegraphic reports from the Singapore bureau for the week ended July 3 reported one case of cholera at Shanghai, China, and the second week after that (July 11–17) 37 cases were reported. According to newspaper reports cholera spread rapidly in the Chinese

[1] From the Office of Statistical Investigations, U. S. Public Health Service.

sections of Shanghai in the beginning of August, and many persons died of the disease.

In British India, cholera deaths declined during May in nearly all the Provinces, and the total number of deaths reported for the four weeks ended June 5 was only 50 per cent of the number reported in the corresponding period of 1926. The Epidemiological Report comments as follows on the cholera situation in the various provinces:

The Punjab, Kashmir, and the North-West Frontier Province were entirely free from cholera; Bombay Presidency, practically free. United Provinces were but little affected, apart from an outbreak in the district of Azamgarh, and only three districts were infected in the Central Provinces. The cholera incidence decreased in May in Bengal, and moderately severe outbreaks were reported in Bihar from the districts Muzaffarpur and Cuttack only. The number of cases reported in Assam was relatively high. The epidemic in the southern part of Madras Presidency continued to decrease; only in the district of Trichinopoly was a certain recrudescence noted in May.

TABLE 1.—*Cholera deaths reported in the Provinces of India*

Province	1926		1925
	Apr. 10–May 8	May 9–June 5	May 10–June 6
North-West Frontier	0	0	29
Kashmir	0	0	4,050
Punjab	2	2	565
Delhi	0	0	3
United Provinces	350	422	166
Bihar and Orissa	3,070	1,745	2,250
Bengal	3,510	902	863
Assam	493	691	247
Central Provinces	124	178	60
Madras Presidency	438	415	1,408
Hyderabad	0	0	0
Bombay Presidency	1	5	1
Burma	737	551	146
Other Indian States	42	26	4
Total	8,767	4,937	9,801

The cholera outbreak in Bangkok reached its peak about the middle of May, and the number of new cases steadily diminished throughout June and July. In the last week of July only 5 new cases were reported, as compared with 362 cases in the week ended May 22. For Siam as a whole the figures are not so recent, but the number of cases seems to have reached a maximum in the week ended May 22, when 710 cases were reported, after which a sharp decline occurred, 414 cases being reported in the week ended May 29, 487 cases in the week ended June 5, and 391 in the week ended June 12.

Table 2 shows the number of cases reported from the various provinces of French Indo-China and from Kwang-Chow-Wan by 10-day periods.

TABLE 2.—*Cholera cases reported in French Indo-China and in Kwang-Chow-Wan June 1 to July 20, 1926*

Province	June			July	
	1-10	11-20	21-31	1-10	11-20
French Indo-China:					
Annam	10	88	30	34	34
Cambodia	175	128	218	181	125
Cochin-China	403	489	267	240	119
Tonkin	200	143	381	254	241
Kwang-Chow-Wan	1	42	28		

In the principal ports of the Far East, where cholera outbreaks were reported in the early summer, the situation was greatly improved at the end of July; Saigon and Cholon and Haiphong had no cases in the last two weeks of July; Rangoon reported one death in each of the last two weeks, and Negapatam reported one death the week ended July 24 and none in the last week

Plague.—"The plague incidence in Egypt increased slightly in June," states the Report; 41 cases were reported during the four weeks ended July 1, as compared with 30 cases during the preceding four weeks, and 21 cases during the first four months of the year. Apart from 4 cases at Suez, the cases occurred in three widely separated Provinces, namely, 21 cases at Beni-Suef and 3 at Girga, in Upper Egypt, and 13 at Beheira in Lower Egypt.

The plague outbreak in Tunisia, referred to last month, apparently reached a maximum in the early part of June and the incidence rapidly declined, although the infection spread from Kairwan Province to the Province of Susa. From the beginning of the outbreak, May 11, to June 31, 157 cases were reported in Kairwan, 14 in Susa, 2 at Kef, and 1 at Sfax. During the first 10 days of July, 6 cases were reported in Kairwan Province and 5 in the Province of Susa.

One case of plague was reported at Constantinople on June 3, one case at Patras, Greece, on June 7, and at Algiers one case was reported in the period June 21 to 30 and one July 1 to 10.

Plague incidence increased markedly in Uganda during April and May. The season of high prevalence is normally from May to September. The cases reported in each week are shown in Table 3.

TABLE 3.—*Plague cases and deaths reported in Uganda, by weeks, from April 4 to June 12, 1926*

Week ended—	Number of cases	Number of deaths	Week ended—	Number of cases	Number of deaths
Apr. 10	10	10	May 15	53	43
Apr 17	29	23	May 22	67	48
Apr. 24	29	24	May 29	101	64
May 1	35	32	June 5	54	38
May 8	58	47	June 12	82	58

In Senegal an outbreak of plague occurred in May, and 129 cases with 71 deaths were reported, as against 12 cases in April.

In Kenya and Madagascar a slight recrudescence in plague occurred in June. Cases reported in Kenya for the four months March, April, May, and June numbered 81, 37, 40, and 79, respectively. For the same months, cases in Madagascar numbered 186, 103, 26, and 66.

The number of new cases of plague at Baghdad began to decline in the latter part of May; 40 cases were reported in the city in the two weeks ended June 5, as against 83 in the preceding two weeks, and 31 cases were reported in the two weeks ended June 19. Cases were also reported from the surrounding district.

In India the deaths from plague showed a gradual decline during May. The plague situation in the present year has been quite favorable except in the northwestern part of the country, particularly in the Punjab, where 15,350 deaths were reported in the four weeks ended June 5, as against 1,148 in the corresponding four weeks of 1925.

TABLE 4.—*Plague deaths reported in India from March to June 1924-1926*

Fortnight ended—	1924	1925	1926
Mar 13	18,407	8,606	10,558
Mar. 27	21,756	11,911	14,229
Apr 10	25,656	9,468	18,345
Apr 24	30,916	8,477	17,435
May 8	24,877	5,031	16,277
May 22	20,588	1,679	13,889
June 5	14,131	938	8,704
June 19	8,070	1,084	

In French Indo-China there were 21 cases of plague reported during June in Cochin-China. At Kwang-Chow-Wan 12 cases of plague were reported in May and 18 cases from June 10 to 19. Plague has been reported in several localities in southern China, but none at either Shanghai or Hongkong. At Amoy 90 cases of plague were reported from May 1 to July 10.

At Yokohama three cases of plague were reported in the week ended July 10.

Typhus fever.—The incidence of typhus fever was less during the past winter, on the whole, than during the winter of 1924–25 in eastern Europe, but its seasonal decline in the spring was somewhat retarded and, therefore, in the late spring the incidence became higher than in the corresponding period of 1925 in a number of countries. The report gives the following summary of the situation in eastern Europe:

Typhus was thus but little less in evidence in Poland in May than in April; 437 cases were reported during the four weeks ended June 5, as against 518 cases during the preceding four weeks, and 402 cases during the corresponding period of 1925. Similarly, there were 66 typhus cases in May in Lithuania, as against

68 in April and 40 in May, 1925. The outbreak in Sub-Carpathian Ruthenia has come to an end; only 6 cases were reported in May and 1 during the first half of June. Hungary remained free from typhus except for 1 case. In Rumania 354 cases were reported in April, as against 384 during the previous month and 153 in April, 1925.

In the U. S. S. R., March returns were, in general, low and differed little from those of the previous month with the exception of western Russia, where there was a certain recrudescence of typhus in the Governments of Smolensk, Pskov, and Gomel. Data for White Russia are not as yet available.

Typhus fever cases were reported by the countries in northern Africa as follows: 214 cases in Algeria and 296 cases in Tunisia in the first six months of 1926; 579 cases in Morocco during the first five months; 631 cases in Egypt during the first 20 weeks of the year.

Relapsing fever.—Relapsing fever was rare in Europe outside of Russia during the first half of 1926. In Poland 7 cases were reported in the first 5 months; in Lithuania 2 cases were reported in the same period; and in the Kingdom of the Serbs, Croats, and Slovenes 1 case was reported down to June 14.

In Russia the March reports showed a decrease in cases compared with the preceding two months. The disease has become rare in the northern part of the country, but was more common in the Black Earth district, on the Volga, and in the Caucasus, though no government reported as many as 100 cases in March.

Smallpox.—The smallpox outbreaks in Japan, Kwantung, and South Manchuria were abating at the end of May. In Japan only 31 cases were reported in the week ended June 5, as against 80 and 150, respectively, during the two preceding weeks. In Korea little change in the prevalence of the disease was indicated; 180 cases were reported in May, 168 in April, and 200 in March.

The incidence of smallpox in northern England was decreasing at the end of June, but was higher than that recorded at the corresponding season during any of the last 20 years. Four hundred and fifty-six cases were reported during the 3 weeks ended July 3, as compared with 614 in the preceding 3 weeks.

Enteric fever.—"The incidence of enteric fever was, everywhere in Europe, lower in May than during the corresponding period of 1925," states the Report. In Italy and Germany an increase in incidence was noted in the June reports. During the four weeks ended June 19, 606 cases were reported in Germany as compared with 403 during the preceding four weeks.

In Japan typhoid fever was more prevalent during the first five months of the current year than at the corresponding season for several years past; 14,804 cases of typhoid and 926 paratyphoid cases were reported between January 1 and May 29, as against 11,634 typhoid and 669 paratyphoid cases during the corresponding period of 1925.

Dysentery.—A lower incidence of dysentery was indicated by the reports for May and the early part of June in nearly all European countries.

In Japan the summer rise in dysentery began in May, with 695 cases reported during the four weeks ended June 5 as compared with 292 cases during the preceding four weeks.

Influenza.—A considerable prevalence of influenza in Russia was indicated, with 637,535 cases reported for the whole country in March, as compared with 316,137 cases in March, 1925.

In previous reports reference has been made to the widespread prevalence of influenza during March and April both in Europe and the United States. Mortality data available show that the number of deaths from this cause declined markedly during May.

Tanganyika Territory reported an influenza outbreak in April, with 1,200 notified cases.

Acute poliomyelitis.—"Data for the month of May showed a low prevalence of poliomyelitis both in Europe and in the United States, and no summer increase had begun. The incidence was somewhat higher than normal in Australia during the first months of the year, but decreased in May; 135 cases were reported during the first 20 weeks of 1926, as compared with 121 cases during the corresponding period of the previous year. During the same period there were only 9 cases of poliomyelitis in New Zealand, where a serious epidemic occurred in 1925, 1,230 being reported in the corresponding 20 weeks."

Scarlet fever and diphtheria.—Both scarlet fever and diphtheria were declining in incidence during the spring months in countries of the Northern Hemisphere, where the seasonal minimum normally occurs in the summer months.

Puerperal fever. The Epidemiological Report this month publishes a table showing the cases of puerperal fever notified in the various countries during 1924, 1925, and the first quarter of 1926. In many European countries this disease is notifiable, but an extremely wide range in the incidence is indicated and "it appears that the notification is hardly seriously enforced in more than a small number of European countries."

PASTEURIZATION OF MILK AND THE NONPULMONARY TUBERCULOSIS DEATH RATE IN NEW YORK CITY [1]

The practice of pasteurizing New York City's milk was started in 1912. At that time approximately 50 per cent of the milk consumed in New York City was subjected to pasteurization. In 1914 the

[1] From the Weekly Bulletin, August 21, 1926, published by the Department of Health of the city of New York.

pasteurization of all milk, save that grade termed certified, was made obligatory by law. The results of this practice are vividly reflected in our nonpulmonary tuberculosis rates. The table below clearly shows the constantly declining death rate for nonpulmonary tuberculosis.

Nonpulmonary tuberculosis death rates in New York City, 1910–1925

Year	Rate per 1,000 population	Year	Rate per 1,000 population
1910	0 29	1918	0 24
1911	30	1919	20
1912	28	1920	.17
1913	.28	1921	14
1914	27	1922	.13
1915	27	1923	.12
1916	23	1924	.14
1917	.24	1925	.12

Of even greater significance than the declining death rate for nonpulmonary tuberculosis is the fact that the examination of tuberculous glands of the neck made in the years previous to pasteurization, revealed that in more than 50 per cent the process was due to the bovine bacillus, whereas in only six of 50 specimens obtained since pasteurization has become general, was the bovine bacillus found, and five out of these six cases were from out-of-town patients who had been fed on raw milk.

The subject of pasteurization is now being actively discussed by health authorities. There is a considerable difference as to the degree of temperature to which the milk to be pasteurized should be exposed. Commercial interests and even certain scientists of very high repute oppose an increase in the temperature employed for pasteurization above 142° F. The Conference of State and Provincial Health Authorities of North America meeting with representatives of the United States Public Health Service in Washington, D. C., on May 24, 1926, unanimously agreed upon a temperature of 145° F. maintained for 30 minutes as the standard for pasteurization. Many cities, fearing that a lower temperature does not give an adequate margin of safety, have adopted the 145° F. standard as their legal requirement. The safety of the lower standard—142° F.—which is the legal requirement in New York City, is therefore brought into question. The commercial interests protest against a higher standard as being unnecessary and claim that if the present thermal requirement is raised, it will necessitate the installation of new equipment and increase the cost of milk to the consumer. They agree, however, that safety is the paramount and primary consideration. The Department of Health of the City of New York is committed to the latter principle, and the commissioner of health is now making a careful

but rapid inquiry to make sure whether we are justified in adhering to our present standard, or whether, in the interest of safety, 145° F. should be made the legal standard even at the sacrifice of a little of the cream line.

A decision will be made only after due consideration and study of the opposing viewpoints, and after conference with those who are qualified to give counsel and testimony.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Experiences with Cross Connections in Chicago. Arthur E. Gorman, Chief Sanitary Engineer, Division of Water Safety Control, City of Chicago. *Journal of the American Water Works Association*, Vol. 15, No. 6, June, 1926, pp. 587–599. (Abstract by Arthur E. Gorman.)

A two years' survey of cross connections in the public water system in Chicago located 491 such connections, 194 of which were of the direct or dangerous type. There were 297 indirect cross connections, such as connections on the suction of pumps, but constituting a relatively low public health risk. The policy followed in Chicago was to require the physical disconnections of direct cross connections, while indirect connections already in existence were permitted where the danger was relatively remote.

The cross connection work was developed with a minimum amount of friction with big industries and with excellent cooperation with the fire underwriters. The sizes of cross connections ranged from ½-inch to 18 inches, the more frequent being—

2-inch (21.4 per cent).
3-inch (14.0 per cent).
4-inch (11.6 per cent).
¾-inch (10.8 per cent).

Special studies were made of cross connections between private water systems within institutions and the public sewers. Dangerous connections were found between swimming pools and pressure filters used on drinking water systems in private institutions, such as apartment hotels and clubs, on account of the frequent backflow of sewage due to flooding of the main sewers. Several types of cross connections are discussed and illustrated by diagrams.

Pollution Affecting Navigation or Commerce on Navigable Waters. Report from Chief of Engineers, United States Army. House of Representatives Document No. 417, Sixty-ninth Congress, first session, June 4, 1926, 28 pages. (Abstract by J. K. Hoskins.)

This is a report of the Chief of Engineers, "giving the results of the investigation, authorized by section 9 of the oil pollution act, of 1924, on the general subject of pollution affecting navigation or

commerce on the navigable waters of the United States or the fisheries therein, together with recommendations for remedial legislation."

Polluting substances contributed to watercourses are divided into two general classes: (1) Domestic sewage and (2) industrial wastes, among the most injurious of which are (*a*) oil, (*b*) coal mining, (*c*) coal distillation, (*d*) metal trades, (*e*) pulp and paper mills, (*f*) tanneries, (*g*) textile, (*h*) miscellaneous.

The source and nature of each of these classes of wastes are briefly discussed, as well as their effect on navigation, commerce, and fisheries. It is stated that, "except in isolated and unimportant instances, the pollution of waters by domestic sewage and industrial wastes does not directly interfere with commerce or commercial navigation." Acid wastes indirectly affect the boilers and hulls of boats and metal parts of locks and dams, necessitating more frequent repairs. Floating oil creates an extra fire hazard but contributes little danger as an origin of fire because it is difficult to ignite. Fisheries are directly affected by toxic products in industrial and oil wastes. Untreated domestic sewage contains little or nothing that is toxic to aquatic life, and the addition of such sewage to the waterways up to a certain pollution density is beneficial to fish life because of the decomposition products, carbon dioxide and nitrates, which stimulate growth of aquatic plants and thereby produce fish food.

A table is included giving a list of navigable and nonnavigable waters into which polluting substances are being deposited to such an extent as to endanger or interfere with navigation and fisheries, the nature of pollution and its effect in each instance being stated in general terms. A summary of the more important findings is given.

Existing Federal laws relating to the pollution of navigable waters are cited, as well as the extent to which each of the States has adopted legislation dealing with pollution in State waters. Interstate agreements for pollution control are briefly mentioned.

The conclusions and recommendations deal with (*a*) fisheries and (*b*) commerce and navigation. In regard to fisheries, while certain streams are now too seriously polluted to support fish life, the economic factors involved do not justify prohibition of such pollution, since, as a general rule, "the value of the products of the fisheries is small as compared to the total value of the products of all the industries which use the waters." Should the Federal Government undertake control of pollution generally, it is probable that State and local authorities would tend to relax their efforts both of study and of law enforcement, "with the result that the entire problem would be left to the Federal Government, which would be confronted with the necessity for providing a large organization to cope with the many local problems which would arise," and accord-

ingly no Federal legislation is recommended so far as the effect of pollution of fisheries is concerned. Federal agencies, such as the Public Health Service, the Bureau of Mines, and the Bureau of Fisheries, are available to communities for assistance in studying their pollution problems.

In regard to the effect on navigation and commerce, Federal legislation for the prevention of pollution by acid mine drainage is not recommended, pending further information on the subject and because the State courts are able to redress individuals or corporations for damages resulting from such pollution. Federal jurisdiction over oil pollution should be extended to include control of such pollution from any source, so that the department may be in a position to cope with all such situations in any of the tidal waters of the United States, as well as those of the Great Lakes. (The act of 1924 applies only to the discharge of oil from oil-burning or oil-carrying vessels).

Studies in Regard to the Lighting of Post Offices, Made by the United States Public Health Service. James E. Ives and Edgar Sydenstricker. *Journal of Industrial Hygiene*, vol. 8, No. 5, May, 1926, pp. 232–247. (Abstract by Leonard Greenburg.)

This paper presents the results of lighting studies made during the years 1921–1923 in the general and City Hall post offices, New York City. These post offices differ in that in the City Hall office practically the only sources of illumination are artificial, while in the general post office 40 per cent is natural. In both offices the artificial illumination averaged about 3.5 foot candles; but this average is misleading, for the illumination was found to be better in the general post office, due to the natural illumination present. Examination of the vision and eye defects of 2,419 employees in these offices revealed a larger number of defects and a smaller percentage of normal vision in the City Hall than the general post office.

The percentage of normal vision in one or both eyes was found to vary with age, being approximately 75 per cent at 22 years of age and falling to 20 per cent at about 57 years of age. These figures were confirmed by other studies, by the investigators of the United States Public Health Service, on nearly 5,000 native white school boys and nearly 6,500 white industrial workers. It was also found that visual acuity was low at 5 years of age (among the school children) and reached a peak at 18 years. The least change in visual acuity was found to occur between the ages of 25 to 45 years. It was found that those persons doing the most intensive eye work have the poorest vision and the greatest number of eye defects.

Since the comparative studies in the two post offices indicated better vision and fewer defects in the well-illuminated office, it seemed reasonable to suppose that at he City Hall post office more illumination was necessary. Card-sorting studies and tests were therefore inaugurated in order to find the relation between speed of sorting and illumination, it being assumed that the illumination yielding the higher sorting rate would be that which would be best for the eyes. Accordingly, the speed of sorting 1,000 typed white cards under various degrees of illumination ranging from 2.8 to 14 foot candles was determined for three groups of workers having vision of 20/20, 20/20 to 20/30, and 20/30 to 20/40, respectively. It was found that those persons having 20/20 and 20/20 to 20/30 reached their maximum rate of production at 8 foot candles and this, plus a 20 per cent allowance for deterioration (making 10 foot candles), has been suggested as a standard.

The authors discuss the various tests which have been suggested or used for the determination of the sufficiency of illumination. It appears that the rate of production method is one of the most satisfactory methods, and the authors have therefore used this method in their further studies on lighting

In the studies on production rates, six series of tests were made under different conditions of illumination, each test of three or four days' duration. The amount of mail sorted by each of eight clerks in the dispatching and in the delivery departments was counted with the illumination varying from 3 3 to 7.7 foot candles. Curves are given for the relation between production rate and illumination.

Several interesting questions are raised at the close of the paper, on which is based the present work of the Public Health Service in these investigations. The two most interesting are (1) the question of why there is a lag in production when illumination is changed, and (2) the determination of ocular fatigue under different degrees of illumination.

DEATHS DURING WEEK ENDED AUGUST 21, 1926

Summary of information received by telegraph from industrial insurance companies for week ended August 21, 1926, and corresponding week of 1925 (From the Weekly Health Index, August 25, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Aug. 21, 1926	Corresponding week, 1925
Policies in force	65, 090, 898	60, 810, 078
Number of death claims	10, 020	8, 830
Death claims per 1,000 policies in force, annual rate	8. 0	7. 6

Deaths from all causes in certain large cities of the United States during the week ended August 21, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, August 25, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Aug. 21, 1926: Total deaths	Week ended Aug. 21, 1926: Death rate[1]	Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year: Week ended Aug. 21, 1926	Deaths under 1 year: Corresponding week, 1925	Infant mortality rate, week ended Aug. 21, 1926[2]
Total (65 cities)	5,801	10.5	10.8	808	852	[3] 65
Akron	31			3	7	32
Albany[4]	27	11.8	15.0	3	4	33
Atlanta	78			9	13	
White	39			5		
Colored	39	(5)		4		
Baltimore[4]	212	13.7	12.6	34	28	99
White	151			26		93
Colored	58	(5)		8		130
Birmingham	57	14.1	14.2	5	6	
White	23			1		
Colored	34	(5)		4		
Boston	177	11.7	11.5	37	24	104
Bridgeport	27			2	2	24
Buffalo	117	11.2	11.6	18	18	75
Cambridge	18	7.7	10.0	4	2	66
Camden	27	10.7	14.2	4	12	68
Canton	17	8.1	6.4	3	3	67
Chicago[4]	536	9.2	9.8	58	60	51
Cincinnati	141	17.9	15.5	22	16	137
Cleveland	164	8.9	8.8	19	22	49
Columbus	62	11.3	13.6	11	14	101
Dallas	54	14.1	14.8	13	6	
White	43			12		
Colored	11	(5)		1		
Dayton	25	7.4	9.3	4	5	63
Denver	65	11.9	15.0	1	16	
Des Moines	26	9.3	6.3	1	0	17
Detroit	201	8.1	10.4	33	58	53
Duluth	23	10.6	8.5	1	0	23
El Paso	35	16.7	16.4	4	7	
Erie	25			4	3	76
Fall River[4]	31	12.3	7.7	7	4	102
Flint	16	6.1	8.0	1	5	17
Fort Worth	26	8.5	9.9	8	5	
White	21			7		
Colored	5	(5)		1		
Grand Rapids	34	11.4	10.5	4	7	58
Houston	46			5	6	
White	36			4		
Colored	10	(5)		1		
Indianapolis	93	13.2	10.6	11	6	81
White	80			8		68
Colored	13	(5)		3		165
Jersey City	56	9.2	7.8	5	4	35
Kansas City, Kans	26	11.6	11.2	2	1	35
White	18			2		42
Colored	8	(5)		0		0
Kansas City, Mo	93	12.9	12.2	12	8	
Los Angeles	196			19	30	53
Louisville	91	15.8	15.9	7	15	60
White	73			7		70
Colored	18	(5)		0		0
Lowell	25			5	5	93
Lynn	16	8.0	8.6	4	2	100
Memphis	49	14.4	20.6	8	12	
White	22			6		
Colored	27	(5)		2		
Milwaukee	76	7.7	6.5	15	3	69
Minneapolis	73	8.8	10.3	7	12	39
Nashville[4]	39	14.8	15.7	4	7	
White	24			2		
Colored	15	(5)		2		
New Bedford	22			4	0	70

See footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended August 21, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Aug. 21, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Aug 21, 1926 [2]
	Total deaths	Death rate [1]		Week ended Aug 21, 1926	Corresponding week, 1925	
New Haven	22	6.3	6.7	2	3	27
New Orleans	146	18.2	20.5	19	24	
White	90			11		
Colored	56	(5)		8		
New York	1,070	9.4	9.5	163	141	66
Bronx borough	111	6.4	7.4	7	13	23
Brooklyn borough	386	9.0	8.7	67	49	68
Manhattan borough	447	12.4	12.3	79	62	87
Queens borough	101	6.9	6.6	8	10	36
Richmond borough	25	9.1	12.1	2	7	35
Newark N. J.	87	9.9	9.0	18	14	86
Norfolk	43	12.9	9.6	10	9	186
White	21			5		149
Colored	22	(5)		5		249
Oakland	44	8.8	9.9	6	3	69
Oklahoma City	28			6	4	
Omaha	47	11.4	11.1	4	7	42
Paterson	30	10.9	9.6	1	1	17
Philadelphia	405	10.5	11.0	54	63	72
Pittsburgh	122	10.0	13.4	26	30	86
Portland, Oreg.	63			2	3	20
Providence	63	11.9	11.1	11	5	91
Richmond	50	13.8	10.9	9	6	113
White	25			5		98
Colored	25	(5)		4		140
Rochester	50	9.6	10.4	5	14	40
St. Louis	163	10.2	13.5	18	35	
St. Paul	51	10.7	9.3	4	3	36
Salt Lake City [4]	32	12.5	11.5	5	1	69
San Antonio	60	15.3	15.5	18	16	
San Diego	28	13.3	15.7	1	3	21
San Francisco	151	13.9	11.1	1	9	6
Schenectady	20	11.2	11.2	7	1	202
Somerville	10	5.2	7.9	2	2	52
Spokane	26	12.4	9.1	2	2	47
Springfield, Mass.	23	8.3	10.3	4	2	58
Syracuse	42	11.9	8.0	4	9	51
Tacoma	29	14.3	9.5	1	1	23
Toledo	73	12.9	12.5	11	12	107
Trenton	30	11.7	13.0	2	7	33
Utica	13	6.6	10.8	2	2	44
Washington, D. C.	90	8.9	11.1	17	17	97
White	51			7		58
Colored	39	(5)		10		182
Waterbury	14			4	1	80
Wilmington, Del.	24	10.1	9.4	5	2	117
Worcester	28	7.6	10.4	3	5	35
Yonkers	17	7.6	8.3	3	2	67

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 62 cities.
[4] Deaths for week ended Friday, August 20, 1926.
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population. Atlanta 31, Baltimore, 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Kansas City, Kans., 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended August 28, 1926

ALABAMA

	Cases
Chicken pox	4
Dengue	1
Diphtheria	24
Influenza	3
Malaria	130
Measles	13
Mumps	11
Ophthalmia neonatorum	1
Pellagra	13
Pneumonia	25
Scarlet fever	11
Smallpox	6
Tuberculosis	108
Typhoid fever	114
Typhus fever	4
Whooping cough	19

ARIZONA

	Cases
Diphtheria	3
Mumps	1
Scarlet fever	2
Smallpox	1
Trachoma	1
Tuberculosis	9
Typhoid fever	1
Whooping cough	3

ARKANSAS

	Cases
Chicken pox	11
Diphtheria	1
Hookworm disease	7
Influenza	1
Malaria	102
Measles	2
Mumps	2
Ophthalmia neonatorum	1

ARKANSAS—continued

	Cases
Paratyphoid fever	6
Pellagra	7
Poliomyelitis	1
Scarlet fever	1
Smallpox	4
Trachoma	2
Tuberculosis	9
Typhoid fever	58
Whooping cough	13

COLORADO

	Cases
Diphtheria	5
Mumps	1
Pneumonia	1
Poliomyelitis	2
Scarlet fever	9
Tuberculosis	31
Typhoid fever	12
Vincent's angina	[illegible]
Whooping cough	[illegible]

CONNECTICUT

	Cases
Chicken pox	3
Conjunctivitis (infectious)	8
Diphtheria	10
German measles	2
Measles	10
Mumps	1
Pneumonia (broncho)	6
Pneumonia (lobar)	2
Poliomyelitis	1
Scarlet fever	8
Septic sore throat	24
Tuberculosis (pulmonary)	25
Typhoid fever	4
Whooping cough	21

DELAWARE

	Cases
Diphtheria	1
Poliomyelitis	5
Scarlet fever	3
Typhoid fever	2
Whooping cough	2

FLORIDA

Cerebrospinal meningitis	1
Chicken pox	2
Dengue	1
Diphtheria	11
Influenza	36
Lethargic encephalitis	2
Malaria	23
Measles	10
Mumps	4
Pneumonia	57
Scarlet fever	5
Smallpox	8
Tetanus	5
Tuberculosis	90
Typhoid fever	32
Typhus fever	4
Whooping cough	7

GEORGIA

Chicken pox	1
Dengue	1
Diphtheria	12
Dysentery	6
Hookworm disease	2
Influenza	25
Malaria	64
Measles	2
Mumps	7
Paratyphoid fever	7
Pneumonia	8
Poliomyelitis	1
Scarlet fever	7
Septic sore throat	3
Smallpox	1
Trachoma	1
Tuberculosis	12
Typhoid fever	76
Whooping cough	6

IDAHO

Diphtheria	14
Measles	1
Poliomyelitis—Garden Valley	1
Scarlet fever	1
Smallpox	1
Tuberculosis	1
Typhoid fever	4
Whooping cough	15

ILLINOIS

Chicken pox	23
Diphtheria	50
Influenza	8
Lethargic encephalitis:	
Cook County	1
Cumberland County	1
Measles	71
Mumps	16

ILLINOIS—continued

	Cases
Pneumonia	79
Poliomyelitis:	
Cook County	2
Edgar County	1
Edwards County	1
Lake County	1
La Salle County	1
Macon County	1
Tazewell County	1
Scarlet fever	53
Smallpox	2
Tuberculosis	374
Typhoid fever	63
Whooping cough	134

INDIANA

Cerebrospinal meningitis	1
Chicken pox	9
Diphtheria	27
Influenza	4
Measles	51
Pneumonia	4
Scarlet fever	36
Smallpox	11
Tuberculosis	22
Typhoid fever	20
Whooping cough	67

IOWA

Diphtheria	18
German measles	2
Lethargic encephalitis	1
Measles	2
Scarlet fever	7
Smallpox	1
Tuberculosis	6
Typhoid fever	7
Whooping cough	20

KANSAS

Chicken pox	2
Diphtheria	9
Influenza	6
Lethargic encephalitis	1
Measles	8
Pneumonia	26
Poliomyelitis:	
Hoisington	1
Hutchinson	3
Isabel	1
Scarlet fever	9
Smallpox	4
Tetanus	1
Tuberculosis	19
Typhoid fever	37
Whooping cough	21

LOUISIANA

Diphtheria	5
Influenza	7
Malaria	30
Pneumonia	20
Scarlet fever	3
Smallpox	5
Trachoma	1
Tuberculosis	81
Typhoid fever	30

MAINE

	Cases
Cerebrospinal meningitis	1
Chicken pox	8
Conjunctivitis	1
Diphtheria	4
German measles	1
Measles	25
Mumps	[illegible]
Scarlet fever	11
Septic sore throat	4
Tuberculosis	3
Typhoid fever	4
Whooping cough	37

MARYLAND[1]

Cerebrospinal meningitis	2
Chicken pox	4
Diphtheria	9
Dysentery	9
Impetigo contagiosa	1
Influenza	1
Lethargic encephalitis	1
Measles	1
Mumps	5
Paratyphoid fever	3
Pneumonia (broncho)	4
Pneumonia (lobar)	3
Poliomyelitis	1
Scarlet fever	6
Tuberculosis	94
Typhoid fever	49
Typhus fever	2
Whooping cough	61

MASSACHUSETTS

Cerebrospinal meningitis	1
Chicken pox	15
Conjunctivitis (suppurative)	2
Diphtheria	36
German measles	6
Influenza	5
Lethargic encephalitis	2
Measles	36
Mumps	20
Ophthalmia neonatorum	6
Pneumonia (lobar)	10
Poliomyelitis	22
Scarlet fever	58
Tetanus	3
Trachoma	2
Tuberculosis (pulmonary)	100
Tuberculosis (other forms)	17
Typhoid fever	28
Whooping cough	68

MICHIGAN

Diphtheria	50
Measles	23
Pneumonia	12
Scarlet fever	31
Smallpox	9
Tuberculosis	72
Typhoid fever	12
Whooping cough	89

[1] Week ended Friday.

MINNESOTA

	Cases
Chicken pox	8
Diphtheria	31
Influenza	1
Lethargic encephalitis	1
Measles	11
Poliomyelitis	1
Scarlet fever	68
Tuberculosis	49
Typhoid fever	7
Whooping cough	19

MISSISSIPPI

Diphtheria	20
Scarlet fever	3
Smallpox	4
Typhoid fever	[illegible]

MISSOURI

Chicken pox	7
Diphtheria	31
Influenza	4
Measles	1
Pneumonia	2
Poliomyelitis	1
Rabies (in animals)	2
Scarlet fever	25
Smallpox	6
Tetanus	1
Tuberculosis	59
Typhoid fever	61
Whooping cough	42

MONTANA

Diphtheria	2
German measles	2
Measles	2
Mumps	1
Poliomyelitis	1
Smallpox	6
Tuberculosis	4
Typhoid fever	2
Whooping cough	5

NEBRASKA

Chicken pox	2
Diphtheria	3
Measles	2
Mumps	1
Pneumonia	1
Poliomyelitis	1
Scarlet fever	7
Smallpox	1
Tuberculosis	9
Typhoid fever	8
Whooping cough	10

NEW JERSEY

Cerebrospinal meningitis	1
Chicken pox	9
Diphtheria	47
Dysentery	3
Influenza	1
Malaria	1
Measles	31

NEW JERSEY—continued

	Cases
Paratyphoid fever	1
Pneumonia	30
Scarlet fever	28
Typhoid fever	23
Whooping cough	95

NEW MEXICO

	Cases
Malaria	1
Measles	2
Mumps	1
Rabies (in animals)	7
Scarlet fever	1
Tuberculosis	42
Typhoid fever	4
Whooping cough	7

NEW YORK

(Exclusive of New York City)

	Cases
Chicken pox	20
Diphtheria	41
Dysentery	4
German measles	7
Malaria	17
Measles	79
Mumps	19
Ophthalmia neonatorum	1
Pneumonia	45
Poliomyelitis	52
Scarlet fever	36
Septic sore throat	2
Tetanus	3
Trachoma	1
Typhoid fever	30
Vincent's angina	6
Whooping cough	173

NORTH CAROLINA

	Cases
Chicken pox	8
Diphtheria	37
German measles	4
Malaria	21
Measles	27
Poliomyelitis	7
Scarlet fever	14
Septic sore throat	4
Smallpox	2
Typhoid fever	97
Whooping cough	175

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Cerebrospinal meningitis:	
Bryan County	1
Woods County	1
Diphtheria	10
Influenza	39
Malaria	212
Measles	16
Pellagra	15
Scarlet fever	10
Typhoid fever	140
Whooping cough	20

[2] Deaths.

OREGON

	Cases
Chicken pox	4
Diphtheria	11
Influenza	7
Malaria	3
Measles	27
Mumps	5
Pneumonia	[2] 7
Scarlet fever	16
Smallpox	4
Tuberculosis	[2] 3
Typhoid fever	10
Whooping cough	4

PENNSYLVANIA

	Cases
Anthrax—Philadelphia	1
Cerebrospinal meningitis—Harrisburg	1
Chicken pox	34
Diphtheria	83
German measles	8
Impetigo contagiosa	5
Measles	136
Mumps	7
Ophthalmia neonatorum—Philadelphia	1
Pneumonia	10
Poliomyelitis	
Philadelphia	2
Scattering	2
Puerperal fever—Hellertown	1
Scarlet fever	67
Tetanus	
Pittsburgh	1
Pottsville	1
Trachoma—Philadelphia	1
Tuberculosis	138
Typhoid fever	55
Whooping cough	291

RHODE ISLAND

	Cases
Diphtheria	2
Scarlet fever	6
Tuberculosis	15
Typhoid fever	1
Whooping cough	3

SOUTH DAKOTA

	Cases
Cerebrospinal meningitis	1
Diphtheria	2
Measles	1
Scarlet fever	10
Typhoid fever	4
Whooping cough	3

TENNESSEE

	Cases
Chicken pox	2
Diphtheria	10
Dysentery	1
Influenza	1
Malaria	87
Measles	22
Mumps	2
Pellagra	7
Pneumonia	1
Scarlet fever	20
Tuberculosis	31
Typhoid fever	102
Whooping cough	48

TEXAS

	Cases
Cerebrospinal meningitis	1
Diphtheria	4
Influenza	4
Measles	2
Mumps	1
Pneumonia	7
Poliomyelitis	1
Scarlet fever	3
Tuberculosis	4
Typhoid fever	6
Whooping cough	23

UTAH

Cerebrospinal meningitis	1
Chicken pox	2
Diphtheria	5
Measles	8
Scarlet fever	3
Typhoid fever	2
Whooping cough	83

VERMONT

Diphtheria	2
Measles	3
Mumps	9
Whooping cough	23

WASHINGTON

Cerebrospinal meningitis:	
Pierce County	1
Thurston County	3
Chicken pox	7
Diphtheria	9
German measles	2
Measles	4
Mumps	5
Pneumonia	2
Poliomyelitis	3
Scarlet fever	14
Smallpox	11
Tuberculosis	30
Typhoid fever	18
Whooping cough	27

WEST VIRGINIA

	Cases
Chicken pox	4
Diphtheria	16
Influenza	9
Measles	18
Scarlet fever	15
Smallpox	3
Tuberculosis	65
Typhoid fever	40
Whooping cough	48

WISCONSIN

Milwaukee	
Chicken pox	9
Diphtheria	6
Measles	[illegible]
Mumps	7
Pneumonia	3
Scarlet fever	13
Tuberculosis	22
Typhoid fever	1
Whooping cough	79
Scattering	
Cerebrospinal meningitis	1
Chicken pox	6
Diphtheria	[illegible]
German measles	3
Influenza	2
Measles	138
Mumps	1
Pneumonia	4
Poliomyelitis	2
Scarlet fever	22
Smallpox	1
Tuberculosis	38
Typhoid fever	3
Whooping cough	121

WYOMING

Chicken pox	1
German measles	1
Scarlet fever	6
Whooping cough	6

Reports for Week Ended August 21, 1926

DISTRICT OF COLUMBIA

	Cases
Diphtheria	7
Measles	3
Pneumonia	15
Scarlet fever	6
Tuberculosis	16
Typhoid fever	4
Whooping cough	14

FLORIDA

Cerebrospinal meningitis	2
Dengue	3
Diphtheria	10
Malaria	18
Measles	6
Mumps	1
Pneumonia	4
Scarlet fever	8
Smallpox	11

FLORIDA—continued

	Cases
Tuberculosis	[illegible]
Typhoid fever	1
Typhus fever	[illegible]
Whooping cough	[illegible]

NORTH DAKOTA

Chicken pox	6
Diphtheria	5
German measles	13
Influenza	[illegible]
Leprosy	1
Lethargic encephalitis	[illegible]
Measles	3
Pneumonia	[illegible]
Poliomyelitis	[illegible]
Scarlet fever	[illegible]
Smallpox	[illegible]
Trachoma	[illegible]

NORTH DAKOTA—continued

	Cases
Tuberculosis	10
Typhoid fever	5
Whooping cough	15

SOUTH CAROLINA

	Cases
Chicken pox	9
Dengue	8
Diphtheria	13
Hookworm disease	36
Influenza	50
Malaria	368
Measles	1
Paratyphoid fever	9
Pellagra	67
Poliomyelitis	1
Scarlet fever	5
Smallpox	3
Tuberculosis	44
Typhoid fever	141
Whooping cough	43

WISCONSIN

	Cases
Milwaukee:	
Chicken pox	4
Diphtheria	4
Measles	17
Mumps	5
Pneumonia	3
Scarlet fever	3
Tuberculosis	32
Whooping cough	53
Scattering:	
Chicken pox	15
Diphtheria	14
German measles	6
Influenza	23
Measles	220
Mumps	11
Pneumonia	11
Poliomyelitis	1
Scarlet fever	40
Trachoma	2
Tuberculosis	18
Typhoid fever	3
Whooping cough	124

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever [2]
July, 1926										
Alabama	4	33	22	335	308	130	3	32	97	417
Idaho	3	11			32		0	28	21	13
Illinois	13	232	386	7	1,980		9	488	95	107
Indiana	3	97	27		638		2	171	185	65
Kansas	5	49	5		180		3	89	21	87
Maine	2	10	2		359	1	0	70	12	6
Montana	2	1	11		44		0	41	29	14
Michigan	0	333	5		950		2	641	36	43
Minnesota	5	165	11		596		8	535	5	20
Mississippi	0	41	234	9,418	326	1,123	10	25	13	643
Missouri	11	163	5	11	407		0	189	26	152
North Carolina	5	60			606		36	54	101	310
Ohio	7	302	12	1	941		16	417	93	85
Oklahoma [1]	5	24	87	332	63	139	4	51	16	413
Oregon	3	89	52	8	156		1	101	108	42
South Carolina		49	305	1,725	40	615	19	17	46	644
South Dakota	2	29			152		1	115	16	11
West Virginia	6	42	34		391		0	64	45	81
Wyoming		1	1		20		0	26	1	2

[1] Exclusive of Tulsa and Oklahoma City
[2] Including paratyphoid fever

SMALLPOX IN TEXAS

The State Board of Health of Texas has compiled statistics showing that smallpox is increasing in that State. During the first seven months of 1924, 857 cases of smallpox were reported. During the same period of later years the number of cases was as follows: 1925, 1,228 cases; 1926, 1,668. Dr. H. O. Sappington, State health officer, urges health officers to use every means possible to secure vaccination of citizens in their respective localities.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended August 14, 1926, 38 States reported 699 cases of diphtheria. For the week ended August 15, 1925, the same States reported 881 cases of this disease. Ninety-nine cities, situated in all parts of the country and having an aggregate population of more than 30,200,000, reported 402 cases of diphtheria for the week ended August 14, 1926. Last year for the corresponding week they reported 440 cases. The estimated expectancy for these cities was 534 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-six States reported 1,117 cases of measles for the week ended August 14, 1926, and 461 cases of this disease for the week ended August 15, 1925. Ninety-nine cities reported 332 cases of measles for the week this year, and 257 cases last year.

Poliomyelitis.—The health officers of 38 States reported 87 cases of poliomyelitis for the week ended August 14, 1926. The same States reported 289 cases for the week ended August 15, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-eight States—this year, 852 cases; last year, 654 cases; 99 cities—this year, 294 cases; last year, 325 cases; estimated expectancy, 240 cases.

Smallpox.—For the week ended August 14, 1926, 38 States reported 304 cases of smallpox. Last year for the corresponding week they reported 156 cases. Ninety-nine cities reported smallpox for the week as follows: 1926, 40 cases; 1925, 40 cases; estimated expectancy, 27 cases. One death from smallpox was reported by these cities for the week this year—at Portland, Oreg.

Typhoid fever.—One thousand one hundred and fifty-three cases of typhoid fever were reported for the week ended August 14, 1926, by 37 States. For the corresponding week of 1925, the same States reported 1,290 cases of this disease. Ninety-nine cities reported 204 cases of typhoid fever for the week this year and 264 cases for the corresponding week last year. The estimated expectancy for these cities was 229 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 94 cities with a population of nearly 29,700,000, as follows: 1926, 292 deaths; 1925, 347 deaths.

City reports for week ended August 14, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine:									
Portland	75,333	0	1	0	0	0	1	1	0
New Hampshire									
Concord	22,546	0	0	0	0	0	2	0	0
Manchester	83,097	0	0	0	0	1	0	0	0
Vermont:									
Barre	10,008	0	0	0	0	0	0	0	0
Burlington	24,089	0	0	0	0	0	0	0	0
Massachusetts:									
Boston	779,620	8	31	5	0	0	23	10	4
Fall River	128,993	1	2	2	0	0	0	1	0
Springfield	142,065	1	1	0	0	0	1	0	0
Worcester	190,757	0	2	0	0	0	0	0	2
Rhode Island:									
Pawtucket	69,760	0	0	0	0	0	0	0	0
Providence	267,918	0	3	4	0	0	1	0	1
Connecticut:									
Bridgeport	(1)	0	4	1	0	0	1	0	1
Hartford	160,197	0	3	1	0	0	0	1	1
New Haven	178,927	2	1	0	0	0	0	0	4
MIDDLE ATLANTIC									
New York:									
Buffalo	538,016	4	11	8	0	0	2	0	1
New York	5,873,356	18	114	84	11	1	12	21	80
Rochester	316,786	1	4	0	0	0	2	0	3
Syracuse	182,003	1	3	0	--------	--------	19	2	2
New Jersey:									
Camden	128,642	0	2	1	0	0	1	1	2
Newark	452,513	6	8	0	2	0	7	5	7
Trenton	132,020	0	1	1	2	0	0	0	1
Pennsylvania:									
Philadelphia	1,979,364	14	34	24	--------	1	7	2	14
Pittsburgh	631,563	3	14	6	--------	0	13	0	18
Reading	112,707	1	2	0	--------	0	3	0	1
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409,333	0	5	3	0	0	1	6	9
Cleveland	936,485	19	18	31	0	0	2	4	6
Columbus	279,836	0	2	1	0	0	1	0	1
Toledo	287,380	2	5	3	0	0	2	0	3
Indiana:									
Fort Wayne	97,846	0	2	0	0	0	3	0	1
Indianapolis	358,819	2	5	2	0	0	2	0	3
South Bend	80,091	1	1	1	0	0	3	0	0
Terre Haute	71,071	0	0	1	0	0	0	0	0
Illinois:									
Chicago	2,995,239	24	60	35	1	0	64	8	15
Peoria	81,564	0	1	0	0	0	1	1	0
Springfield	63,923	1	0	0	0	0	0	0	0
Michigan:									
Detroit	1,245,824	10	25	55	0	0	6	0	11
Flint	130,316	0	4	1	0	0	6	0	1
Grand Rapids	153,698	0	2	0	0	0	0	1	1

[1] No estimate made.

City reports for week ended August 14, 1926—Continued

Division, State, and city	Population July 1, 1926, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
EAST NORTH CENTRAL—continued									
Wisconsin:									
Kenosha	50,891	2	0	0	0	0	11	0	1
Madison	46,385		0						
Milwaukee	509,192	12	10	7	0	0	22	3	3
Racine	67,707	1	0	3	0	0	2	2	0
Superior	39,671	0	0	8	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	110,502	0	2	0	0	0	8	0	0
Minneapolis	425,435	7	12	6	0	0	2	0	4
St. Paul	246,001	0	11	3	0	1	5	0	4
Iowa:									
Davenport	52,469	0	0	0	0		0	0	
Sioux City	76,411		0						
Waterloo	36,771	0	1	0	0		4	0	
Missouri:									
Kansas City	367,481	1	3	2	0	0	0	0	1
St. Joseph	78,342	0	0	0	0	0	1	0	0
St. Louis	821,543	2	17	16	0	0	11	2	
North Dakota:									
Fargo	26,403	0	0	0	0	0	1	0	0
South Dakota:									
Aberdeen	15,036	0	0	0	0		0	0	
Sioux Falls	30,127		0						
Nebraska:									
Lincoln	60,941	0	0	0	0	1	1	1	1
Omaha	211,768	1	5	0	0	0	0	0	2
Kansas:									
Topeka	55,411	0	0	0	0	0	0	0	1
Wichita	88,367	0	0	0	0	0	1	0	0
SOUTH ATLANTIC									
Delaware:									
Wilmington	122,049	0	1	0	0	0	0	0	0
Maryland:									
Baltimore	796,296	1	11	6	1	0	24	6	5
Cumberland	33,741	0	0	0	0	0	0	0	1
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia:									
Washington	497,906	0	3	4	0	0	4	0	6
Virginia:									
Lynchburg	30,395	0	0	0	0	0	0	0	0
Norfolk	(1)	0	0	0	0	0	0	0	0
Richmond	186,403	0	4	7	0	0	7	1	4
Roanoke	58,208	0	1	0	0	0	0	0	2
West Virginia:									
Charleston	49,019	0	0	0	0	0	0	0	0
Huntington	63,485	0	1	4	0	0	0	0	0
Wheeling	56,208	0	0	0	0	0	0	0	0
North Carolina:									
Raleigh	30,371	0	1	1	0	0	0	0	0
Wilmington	37,061	0	0	0	0	0	0	0	0
Winston-Salem	69,031	0	1	4	0	0	6	0	1
South Carolina:									
Charleston	73,125	0	0	0	4	0	0	0	0
Columbia	41,225	0	0	0	0	0	0	0	0
Greenville	27,311	0	0	0	0	0	0	0	0
Georgia:									
Atlanta	(1)	0	2	4	12	0	1	0	5
Brunswick	16,809	0	0	0	0	0	0	0	0
Savannah	93,134	0	1	0	1	0	0	0	4
Florida:									
Miami	69,754	0		5	0	0	0	0	3
St. Petersburg	26,847		0			0			1
Tampa	94,743	0	1	0	0	0	1	1	2

[1] No estimate made.

City reports for week ended August 14, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL									
Kentucky:									
Covington	58, 309	0	0	0	0	0	0	0	0
Louisville	305, 935	1	3	3	0	0	0	0	1
Tennessee:									
Memphis	174, 533	3	2	3	0	0	4	0	4
Nashville	136, 220	0	1	3	0	1	1	0	1
Alabama:									
Birmingham	205, 670	1	2	2	0	1	0	2	4
Mobile	65, 955	0	0	0	0	0	0	0	0
Montgomery	46, 481	0	1	0	0	0	1	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	31, 643	1	0	0	0	-------	0	0	-------
Little Rock	74, 216	0	0	0	0	0	0	0	1
Louisiana:									
New Orleans	414, 493	0	6	2	1	2	0	0	9
Shreveport	57, 857	0	1	1	0	0	0	0	1
Oklahoma:									
Oklahoma City	(1)	0	1	0	5	0	0	0	3
Texas:									
Dallas	194, 450	0	3	2	0	1	0	0	4
Galveston	48, 375	0	0	0	0	0	0	0	2
Houston	164, 954	0	2	1	0	0	0	0	[illegible]
San Antonio	198, 069	0	1	0	0	0	1	0	0
MOUNTAIN									
Montana:									
Billings	17, 971	-------	0	0	0	0	0	-------	0
Great Falls	29, 883	0	1	0	0	0	0	0	1
Helena	12, 037	0	0	0	0	0	0	0	0
Missoula	12, 668	0	0	0	0	0	0	0	0
Idaho:									
Boise	23, 042	0	0	1	0	0	0	0	0
Colorado:									
Denver	280, 911	1	9	5	-------	0	4	0	4
Pueblo	43, 787	0	1	0	0	0	0	0	2
New Mexico:									
Albuquerque	21, 000	0	1	0	0	0	0	0	1
Arizona:									
Phoenix	38, 669	0	0	0	0	0	0	0	1
Utah:									
Salt Lake City	130, 948	2	2	2	0	0	3	7	1
Nevada:									
Reno	12, 665	0	0	0	0	0	0	0	1
PACIFIC									
Washington:									
Seattle	(1)	0	3	2	0	-------	8	3	-------
Spokane	108, 897	2	2	4	0	-------	2	0	-------
Tacoma	104, 455	3	2	3	0	0	0	0	0
Oregon:									
Portland	282, 383	1	3	5	0	0	10	0	5
California:									
Los Angeles	(1)	5	23	24	1	0	6	2	10
Sacramento	72, 260	1	2	0	0	0	0	2	0
San Francisco	557, 530	1	13	6	0	0	19	1	1

[1] No estimate made.

City reports for week ended August 14, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine:											
Portland	0	2	0	0	0	0	1	0	0	9	14
New Hampshire:											
Concord	1	0	0	0	0	0	1	0	0	0	9
Manchester	1	2	0	0	0	0	0	0	0	0	19
Vermont:											
Barre	0	0	0	0	0	1	0	0	0	0	[illegible]
Burlington	1	0	0	0	0	0	0	0	0	8	5
Massachusetts:											
Boston	12	19	0	0	0	18	3	1	0	44	181
Fall River	0	0	0	0	0	1	2	1	0	5	21
Springfield	2	0	0	0	0	0	1	0	0	6	17
Worcester	2	1	0	0	0	6	0	0	0	2	49
Rhode Island:											
Pawtucket	0	0	0	0	0	1	0	0	0	0	19
Providence	2	1	0	0	0	1	1	0	0	4	50
Connecticut:											
Bridgeport	2	3	0	0	0	1	1	2	0	2	20
Hartford	1	3	0	0	0	2	1	1	0	8	22
New Haven	1	0	0	0	0	3	3	2	0	3	31
MIDDLE ATLANTIC											
New York:											
Buffalo	5	2	0	0	0	3	3	1	0	14	109
New York	25	37	0	0	0	[1] 103	39	34	4	69	1,107
Rochester	3	0	0	0	0	2	1	2	0	10	59
Syracuse	2	0	0	0	0	0	0	0	0	11	43
New Jersey:											
Camden	1	4	0	0	0	2	2	2	0	1	33
Newark	4	6	0	0	0	6	2	1	0	56	85
Trenton	1	1	0	0	0	7	1	2	0	0	31
Pennsylvania:											
Philadelphia	16	7	0	0	0	26	12	3	0	51	381
Pittsburgh	9	3	1	0	0	6	3	2	0	54	130
Reading	1	0	0	0	0	3	1	1	0	18	33
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	2	4	1	0	0	11	3	4	0	3	137
Cleveland	6	9	1	0	0	11	5	2	0	94	173
Columbus	2	3	1	0	0	4	2	0	0	5	68
Toledo	4	5	1	4	0	8	2	1	0	42	59
Indiana:											
Fort Wayne	1	1	1	0	0	3	1	1	0	4	23
Indianapolis	2	1	1	2	0	6	2	2	0	16	104
South Bend	1	0	0	0	0	0	0	0	0	4	7
Terre Haute	0	0	0	0	0	1	1	0	0	0	16
Illinois:											
Chicago	25	25	0	0	0	43	6	7	2	57	497
Peoria	1	0	0	0	0	0	0	0	0	1	9
Springfield	0	2	0	0	0	1	0	0	0	8	20
Michigan:											
Detroit	20	23	3	0	0	24	5	11	1	75	261
Flint	3	4	0	0	0	1	1	0	0	6	20
Grand Rapids	1	1	0	0	0	0	1	0	0	2	32
Wisconsin:											
Kenosha	1	0	1	0	0	0	0	1	0	10	10
Madison	0	......	0	......	......	......	0	......	......	......	......
Milwaukee	7	5	1	0	0	4	1	0	0	86	80
Racine	1	0	0	0	0	0	0	1	0	4	......
Superior	1	3	0	0	0	0	0	0	0	0	7
WEST NORTH CENTRAL											
Minnesota:											
Duluth	3	6	0	0	0	2	1	0	0	1	21
Minneapolis	9	13	2	0	0	6	2	2	0	2	75
St. Paul	5	6	1	0	0	5	1	1	0	14	47

[1] Pulmonary tuberculosis only.

City reports for week ended August 14, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL—contd											
Iowa:											
Davenport	0	0	0	0	-------	-------	0	0	-------	0	-------
Sioux City	0	-------	0	-------	-------	-------	0	-------	-------	-------	-------
Waterloo	1	0	0	0	-------	-------	0	4	-------	0	-------
Missouri:											
Kansas City	2	1	0	0	0	7	3	2	2	6	99
St. Joseph	0	1	0	0	0	0	1	0	0	0	-------
St. Louis	5	21	0	1	0	15	7	2	0	20	218
North Dakota:											
Fargo	1	2	0	1	0	0	0	0	0	5	2
South Dakota:											
Aberdeen	0	0	0	0	-------	-------	0	0	-------	0	-------
Sioux Falls	0	-------	0	-------	-------	-------	0	-------	-------	-------	-------
Nebraska:											
Lincoln	0	0	0	0	0	0	0	0	1	2	17
Omaha	1	5	1	0	0	1	0	0	0	3	40
Kansas:											
Topeka	1	1	0	0	0	0	1	0	0	3	17
Wichita	0	2	1	0	0	0	2	0	0	15	25
SOUTH ATLANTIC											
Delaware:											
Wilmington	1	0	0	0	0	1	1	0	1	1	24
Maryland:											
Baltimore	0	3	0	0	0	14	9	12	1	97	186
Cumberland	0	1	0	0	0	0	1	1	0	0	9
Frederick	0	0	0	0	0	0	0	0	0	0	4
District of Columbia:											
Washington	3	2	0	2	0	16	5	3	1	19	139
Virginia:											
Lynchburg	0	1	0	0	0	0	1	9	0	7	12
Norfolk	1	2	0	0	0	1	2	4	1	15	-------
Richmond	2	3	0	1	0	3	3	2	0	0	71
Roanoke	0	1	0	1	0	1	2	0	0	0	14
West Virginia:											
Charleston	0	0	0	1	0	1	2	0	0	5	19
Huntington	1	1	0	0	0	0	1	0	0	6	-------
Wheeling	1	0	0	0	0	0	1	0	0	0	18
North Carolina:											
Raleigh	0	0	0	0	0	1	1	0	0	21	14
Wilmington	0	0	0	1	0	1	1	0	0	14	7
Winston-Salem	1	0	0	0	0	4	3	2	0	0	19
South Carolina:											
Charleston	0	0	0	0	0	3	3	1	1	0	30
Columbia	0	1	0	0	0	0	2	3	0	0	-------
Greenville	0	0	0	0	0	0	1	0	0	0	9
Georgia:											
Atlanta	2	1	1	0	0	5	4	10	0	1	81
Brunswick	0	0	0	0	0	0	0	0	0	0	2
Savannah	0	0	1	0	0	0	2	0	0	0	27
Florida:											
Miami	-------	0	-------	0	0	1	-------	3	0	2	17
St. Petersburg	0	-------	0	-------	0	0	0	-------	0	-------	5
Tampa	0	1	0	0	0	1	1	6	2	0	28
EAST SOUTH CENTRAL											
Kentucky:											
Covington	0	0	0	1	0	0	1	0	0	0	23
Louisville	1	5	0	0	0	5	5	6	0	4	63
Tennessee:											
Memphis	1	1	0	2	0	4	6	10	1	18	78
Nashville	1	2	0	0	0	4	7	8	1	17	49
Alabama:											
Birmingham	2	1	0	2	0	8	7	0	0	11	75
Mobile	0	0	1	0	0	1	1	2	0	9	19
Montgomery	1	0	0	0	0	0	1	1	0	0	14

City reports for week ended August 14, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	0	0	--------	--------	1	0	0	0	--------
Little Rock	0	0	0	0	0	1	3	0	0	0	--------
Louisiana											
New Orleans	1	1	0	5	0	9	5	1	1	2	143
Shreveport	0	0	0	0	0	4	3	1	2	0	29
Oklahoma:											
Oklahoma City	1	2	0	0	0	1	2	4	0	0	23
Texas:											
Dallas	2	4	0	0	0	5	4	1	0	3	55
Galveston	0	0	0	0	0	1	0	0	0	0	14
Houston	0	0	0	0	0	1	1	4	0	0	50
San Antonio	0	0	0	0	0	0	1	4	0	0	--------
MOUNTAIN											
Montana:											
Billings	0	1	0	0	0	0	0	0	0	--------	
Great Falls	1	0	0	8	0	0	0	0	0	2	10
Helena	0	0	0	0	0	1	0	0	0	0	8
Missoula	0	0	0	0	0	0	0	0	0	0	5
Idaho:											
Boise	0	1	1	0	0	0	0	0	0	0	2
Colorado:											
Denver	2	2	1	0	0	4	2	1	0	4	70
Pueblo	1	0	0	0	0	0	1	3	0	0	12
New Mexico:											
Albuquerque	0	0	0	0	0	6	1	0	0	1	20
Arizona:											
Phoenix	--------	0	0	0	0	5	0	0	0	0	14
Utah:											
Salt Lake City	1	0	0	0	0	0	2	1	0	19	25
Nevada:											
Reno	0	0	0	0	0	0	0	3	0	0	4
PACIFIC											
Washington:											
Seattle	3	4	2	0	--------	--------	1	0	--------	13	--------
Spokane	2	5	2	0	--------	--------	0	0	--------	5	--------
Tacoma	1	5	1	8	0	1	0	0	0	3	24
Oregon:											
Portland	2	9	5	4	1	4	1	1	0	1	75
California:											
Los Angeles	6	11	2	4	0	33	5	0	3	2	100
Sacramento	1	1	0	0	0	2	1	6	0	0	16
San Francisco	5	6	0	0	0	5	2	5	0	3	113

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis: Cases	Poliomyelitis: Deaths
NEW ENGLAND									
Massachusetts:									
Boston	0	0	1	0	0	0	1	1	1
Springfield	0	0	0	0	0	0	0	8	0
Worcester	0	0	0	1	0	0	0	5	1
Rhode Island:									
Providence	0	2	0	0	0	0	1	1	0
MIDDLE ATLANTIC									
New York:									
Buffalo	0	0	1	1	0	0	0	16	2
New York	0	1	0	2	0	0	7	3	0
Syracuse	0	0	0	0	0	0	1	11	3
Pennsylvania:									
Philadelphia	0	0	1	0	0	0	0	3	0

City reports for week ended August 14, 1926—Continued

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis: Cases	Poliomyelitis: Deaths
EAST NORTH CENTRAL									
Ohio:									
Cleveland [1]	0	0	1	0	0	0	1	2	0
Illinois:									
Chicago	0	0	0	0	1	1	4	0	0
Wisconsin:									
Milwaukee	1	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Missouri:									
Kansas City	0	0	1	1	0	0	0	0	0
Kansas:									
Topeka	1	0	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	0	0	1	0	0	0	1	3	2
Cumberland	0	0	1	0	0	0	0	0	0
Virginia:									
Richmond	0	0	0	0	0	0	0	1	0
North Carolina:									
Raleigh	0	0	0	0	0	1	0	0	0
Winston-Salem	0	0	0	0	1	0	0	0	0
South Carolina:									
Charleston	0	0	0	0	12	3	0	0	0
Georgia:									
Savannah	0	0	0	0	0	0	0	1	0
Florida:									
Miami [2]	0	0	0	0	0	0		1	0
EAST SOUTH CENTRAL									
Tennessee:									
Nashville	0	0	0	0	0	1	0	0	0
Alabama:									
Birmingham	0	0	0	0	1	0	0	0	0
Mobile	0	0	0	0	0	0	0	1	0
Montgomery	0	0	0	0	0	0	0	1	0
WEST SOUTH CENTRAL									
Arkansas:									
Little Rock	0	0	0	0	0	1	0	0	0
Texas:									
Dallas	0	0	0	0	0	1	0	0	0
MOUNTAIN									
Montana:									
Missoula	1	0	0	0	0	0	0	0	0
Utah:									
Salt Lake City	1	0	0	0	0	0	0	0	0
PACIFIC									
California:									
Los Angeles [1]	0	0	0	1	0	0	1	3	0
Sacramento	0	0	0	0	1	0	0	0	0

[1] Rabies (human), 1 case and 1 death at Cleveland, Ohio, and 1 death at Los Angeles, Calif.
[2] Dengue, 1 case at Miami, Fla.

The following table gives the rates per 100,000 population for 102 cities for the five-week period ended August 14, 1926, compared with those for a like period ended August 15, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 102 cities reporting cases had

an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, July 11 to August 14, 1926. Annual rates per 100,000 population. Compared with rates for the corresponding period of 1925 [1]

	Week ended—									
	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug. 1, 1925	July 31, 1926	Aug. 8, 1925	Aug. 7, 1926	Aug. 15, 1925	Aug. 14, 1926
DIPHTHERIA CASE RATES										
102 cities	76	[2] 94	75	[2] 90	[3] 75	[4] 80	[4] 83	[5] 79	77	[6] 69
New England	60	78	60	33	60	40	79	40	89	31
Middle Atlantic	96	101	90	109	92	103	83	88	78	62
East North Central	68	100	68	99	69	83	94	[7] 105	68	[7] 101
West North Central	83	[2] 107	103	[2] 95	97	[2] 85	[8] 105	[2] 52	107	[9] 56
South Atlantic	50	32	42	34	[3] 48	21	52	[10] 46	60	49
East South Central	11	21	11	10	11	21	26	10	32	57
West South Central	26	26	66	39	40	39	22	[11] 35	48	26
Mountain	120	100	111	64	148	91	[12] 66	[12] 121	177	73
Pacific	94	159	90	175	64	119	141	102	80	105
MEASLES CASE RATES										
102 cities	153	[2] 215	101	[2] 155	[3] 70	[2] 103	[4] 51	[5] 67	46	[6] 57
New England	252	180	208	109	180	83	127	83	125	69
Middle Atlantic	198	129	127	108	77	63	60	42	57	33
East North Central	178	365	111	243	68	171	44	[7] 96	35	[7] 77
West North Central	28	[2] 191	18	[2] 183	30	[2] 93	[8] 10	[2] 58	24	[9] 69
South Atlantic	140	203	90	128	[3] 68	115	42	[10] 50	40	81
East South Central	74	171	58	125	26	93	11	42	16	31
West South Central	0	17	4	13	0	9	0	[11] 10	9	4
Mountain	28	191	37	173	102	127	[12] 19	[12] 139	18	64
Pacific	61	329	10	213	33	121	28	121	19	94
SCARLET FEVER CASE RATES										
102 cities	58	[2] 98	55	[2] 83	[3] 54	[2] 73	[4] 51	[5] 61	57	[6] 51
New England	77	99	69	85	72	118	98	104	81	69
Middle Atlantic	45	73	42	75	37	52	43	48	36	30
East North Central	63	118	63	93	60	85	48	[7] 79	54	[7] 56
West North Central	105	[2] 185	115	[2] 127	121	[2] 143	[8] 117	[2] 101	120	[9] 121
South Atlantic	44	45	15	36	[3] 34	44	21	[10] 40	38	30
East South Central	74	52	26	93	58	62	58	31	37	47
West South Central	22	52	31	82	26	39	53	[11] 15	66	22
Mountain	83	91	157	64	83	30	[12] 38	[12] 65	92	26
Pacific	58	94	44	92	47	86	61	84	83	86

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Sioux Falls, S. Dak., not included.
[3] Tampa, Fla., not included.
[4] Waterloo, Iowa, and Helena, Mont., not included.
[5] Madison, Wis., Sioux Falls, S. Dak., Norfolk, Va., Houston, Tex., and Helena, Mont., not included.
[6] Madison, Wis., Sioux City, Iowa, and Sioux Falls, S. Dak., not included.
[7] Madison, Wis., not included.
[8] Waterloo, Iowa, not included.
[9] Sioux City, Iowa, and Sioux Falls, S. Dak., not included.
[10] Norfolk, Va., not included.
[11] Houston, Tex., not included.
[12] Helena, Mont., not included.

Summary of weekly reports from cities, July 11 to August 14, 1926—Annual rates per 100,000 population Compared with rates for the corresponding period of 1925 Continued

SMALLPOX CASE RATES

	Week ended—									
	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug. 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926
102 cities	11	[2] 7	10	[2] 6	[3] 9	[2] 5	[4] 9	[5] 7	7	[6] 7
New England	2	0	5	0	0	0	0	0	0	0
Middle Atlantic	1	1	0	0	0	1	0	1	0	0
East North Central	9	6	8	8	3	6	6	[7] 9	3	[7] 1
West North Central	16	[2] 26	12	[2] 14	14	[2] 4	[8] 8	[2] 14	16	[9] 4
South Atlantic	8	6	15	6	[3] 2	2	2	[10] 8	4	11
East South Central	42	5	37	10	21	5	47	16	21	26
West South Central	13	13	4	13	4	4	13	[11] 15	9	22
Mountain	18	9	0	27	55	9	[12] 19	[12] 9	9	73
Pacific	113	22	64	8	80	32	64	24	64	32

TYPHOID FEVER CASE RATES

	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug. 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926
102 cities	36	[2] 22	33	[2] 18	[3] 40	[2] 30	[4] 40	[5] 28	46	[6] 35
New England	31	12	22	9	22	14	26	12	38	17
Middle Atlantic	25	11	21	9	30	23	23	19	33	24
East North Central	11	5	8	6	10	10	20	[7] 12	17	[7] 19
West North Central	42	[2] 14	38	[2] 12	46	[2] 22	[8] 41	[2] 18	55	[9] 23
South Atlantic	52	58	50	47	[3] 64	54	56	[10] 70	86	100
East South Central	205	166	163	135	168	259	252	182	200	140
West South Central	128	56	163	30	151	47	123	[11] 50	97	47
Mountain	18	0	46	46	55	36	[12] 104	[12] 28	102	73
Pacific	30	22	28	8	44	11	17	30	41	30

INFLUENZA DEATH RATES

	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug. 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926
96 cities	2	[2] 4	2	[2] 3	[3] 1	[2] 2	[12] 2	[5] 2	2	[13] 1
New England	0	0	0	2	0	0	5	0	0	0
Middle Atlantic	2	4	3	2	1	1	2	2	3	1
East North Central	3	4	1	4	0	1	3	[7] 1	3	[7] 0
West North Central	0	[2] 0	4	[2] 2	0	[2] 0	0	[2] 0	0	[2] 2
South Atlantic	4	6	4	4	[3] 2	2	6	[10] 4	0	0
East South Central	0	21	5	5	0	5	5	0	5	10
West South Central	10	9	0	9	0	24	5	[11] 6	0	14
Mountain	0	0	9	9	0	0	[12] 0	[12] 9	9	0
Pacific	4	4	0	4	0	4	0	11	0	0

PNEUMONIA DEATH RATES

	July 18, 1925	July 17, 1926	July 25, 1925	July 24, 1926	Aug. 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926
96 cities	51	[2] 60	48	[2] 54	[3] 50	[2] 48	[12] 52	[5] 54	60	[13] 50
New England	48	57	50	33	53	33	36	54	29	31
Middle Atlantic	62	71	51	64	65	41	65	56	73	62
East North Central	44	46	37	46	45	48	36	[7] 42	47	[7] 35
West North Central	53	[2] 36	40	[2] 40	40	[2] 57	51	[2] 51	42	[2] 25
South Atlantic	48	54	52	58	[3] 60	51	50	[10] 70	73	56
East South Central	68	109	58	99	68	62	63	52	78	52
West South Central	73	85	63	57	116	76	68	[11] 101	82	113
Mountain	83	36	55	64	74	55	[12] 28	[12] 65	55	82
Pacific	40	46	58	35	62	71	69	57	80	39

[2] Sioux Falls, S Dak , not included.
[3] Tampa, Fla., not included
[4] Waterloo, Iowa, and Helena, Mont , not included
[5] Madison, Wis , Sioux Falls, S Dak , Norfolk, Va , Houston, Tex., and Helena, Mont , not included.
[6] Madison, Wis , Sioux City, Iowa, and Sioux Falls, S. Dak , not included.
[7] Madison, Wis., not included.
[8] Waterloo, Iowa, not included.
[9] Sioux City, Iowa, and Sioux Falls, S Dak., not included.
[10] Norfolk, Va., not included
[11] Houston, Tex., not included
[12] Helena, Mont , not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases, 1925	Aggregate population of cities reporting cases, 1926	Aggregate population of cities reporting deaths, 1925	Aggregate population of cities reporting deaths, 1926
Total	102	96	29,930,185	30,458,186	29,251,658	29,764,201
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	13	11	2,580,151	2,619,719	2,461,380	2,499,036
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,895
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,460,144

FOREIGN AND INSULAR

SMALLPOX ON VESSEL

Steamship from Glasgow, Scotland.—On July 17, 1926, a steamship arrived at Greenock, Scotland, from Canada, with history of a smallpox case removed from the vessel at a quarantine station on the vessel's outward journey from Glasgow to Canadian port. The vessel left Glasgow June 25 and the patient, a resident of Glasgow, was taken ill July 2, 1926. No history of smallpox in the patient's family was discovered, but it was found that four cases of chicken pox had occurred in the family and a small school epidemic of chicken pox had occurred in the district.

THE FAR EAST

Report for week ended July 31, 1926.—The following report for the week ended July 31, 1926, was transmitted by the far eastern bureau of the health section of the secretariat of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt						
Alexandria	2	0	0	0	5	1
Suez	2	0	0	0	0	0
British India						
Bombay	----	1	----	1	8	7
Madras	----	0	----	0	3	1
Rangoon	----	7	----	1	0	0
Karachi	----	0	----	0	1	1
Ceylon Colombo	0	0	0	0	1	0

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Siam Bangkok	0	0	5	4	9	7
China						
Amoy	5	----	0	0	0	0
Shanghai	0	0	311	60	0	0
Japan						
Yokohoma [1]	1	2	0	0	0	0
Osaka	0	0	0	0	1	0
U S S R Vladivostok	0	0	0	0	1	0

[1] One infected rat has been found outside of the port area

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Iraq.—Basra.

British India—Negapatam, Chittagong, Cochin, Tuticorin, Vizagapatam.

Federated Malay States—Port Swettenham.

Straits Settlements.—Penang, Singapore.

Dutch East Indies—Batavia, Surabaya, Samarang, Cheribon, Belawan Deli, Palembang, Sabang, Makassar, Menado, Banjermasin, Balik-Papan, Tarakan, Padang, Samarinda.

Sarawak.—Kuching.
British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.
Portuguese Timor.—Dilly.
Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.
French Indo-China.—Saigon and Cholon, Turane, Haiphong.
China.—Hongkong.
Formosa.—Keelung.
Kwantung.—Port Arthur, Dairen.
Japan.—Nagasaki, Moji, Kobe, Nugata, Tsuruga, Hakodate, Simonoseki.
Korea.—Chemulpo, Fusan.
Manchuria.—Antung, Mukden, Changchun, Harbin.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.
New Guinea.—Port Moresby.
New Zealand.—Auckland, Wellington, Christchurch, Invercargil, Dunedin.
New Caledonia.—Noumea.
Fiji.—Suva.
Hawaii.—Honolulu.

AFRICA

Egypt.—Port Said.
Anglo-Egyptian Sudan.—Port Sudan, Suakin.
Eritrea.—Massaua.
French Somaliland.—Jibuti.
British Somaliland.—Berbera.
Italian Somaliland.—Mogadiscio.
Kenya.—Mombasa.
Zanzibar.—Zanzibar.
Tanganyiki.—Dar-es-Salaam.
Seychelles.—Victoria.
Mauritius.—Port Louis.
Portuguese East Africa.—Mozambique, Beira, Lourenço-Marques.
Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from:

British India.—Calcutta.
Dutch East Indies.—Pontianak.
Madagascar.—Tamatave, Majunga.

CANADA

Communicable diseases, week ended August 14, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the week ended August 14, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal fever			1	1		1		3
Influenza	10							10
Poliomyelitis				2				2
Smallpox				6		1		7
Typhoid fever	1		6	11	5		7	30

Communicable diseases—Ontario—July, 1926—Comparative.—During the month of July, 1926, communicable diseases were reported in the Province of Ontario, Canada, as follows:

Disease	July, 1926		July, 1925	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis	6	3		4
Chancroid	1		1	
Chicken pox	503		330	
Diphtheria	183	14	151	19
German measles	150		6	
Gonorrhea	131		144	
Influenza		10		5
Lethargic encephalitis	5	4		10
Measles	1,955	8	642	
Mumps	37		108	
Pneumonia		137		77
Poliomyelitis			4	
Scarlet fever	289	3	252	3
Smallpox	41		8	
Syphilis	118		65	
Tuberculosis	177	72	158	82
Typhoid fever	57		57	3
Whooping cough	325	3	345	9

Smallpox.—Smallpox was reported at 12 localities in the Province of Ontario, the greatest number being reported at MacTier and Peterboro, viz, 9 each; and at Belleville, with 6 cases; at Kingston and Parry Sound, 4 cases each were reported; at Ottawa and Richmond Township, 2 cases each; and at 5 localities, including Toronto, 1 case each.

CHINA

Morbidity—Mortality—Shanghai—July 1, 1925–June 30, 1926.—During the year ended June 30, 1926, there were reported at Shanghai China, 10,816 deaths among Chinese and 554 deaths in the foreign population. Cases of disease and causes of death were reported as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Beriberi	6	34	Measles [1]		332
Cerebrospinal meningitis	2	6	Scarlet fever	106	556
Cholera	23	93	Smallpox	82	205
Diarrhea (acute) [1]		29	Tuberculosis [3]	52	996
Diphtheria	36	98	Typhoid fever [4]	88	347
Dysentery [2]	81	159	Typhus fever	1	1
Influenza		28			

[1] Not notifiable.
[2] Amebic, 38, bacillary, 43.
[3] All forms.
[4] Including 20 paratyphoid cases.

Population. Foreign, 38,046, Chinese, 1,098,065 Cases reported, foreign; deaths, Chinese.

Examination of rats.—During the same period, 28,114 rats were examined at Shanghai for plague infection. No plague-infected rats were found.

Arrivals from Canton subject to quarantine.—Under date of July 26, 1926, vessels arriving from Canton were declared subject to quarantine in the port of Shanghai on account of cholera.

CUBA

Communicable diseases—Habana—July, 1926.—During the month of July, 1926, communicable diseases were reported at Habana, Cuba, as follows:

Disease	New cases	Deaths	Remaining under treatment July 31, 1926	Disease	New cases	Deaths	Remaining under treatment July 31, 1926
Cerebrospinal meningitis	1	1		Measles	24	1	25
Chicken pox	2			Paratyphoid fever	3		2
Diphtheria	9	1		Scarlet fever	6		4
Malaria [1]	84	3	34	Typhoid fever [1]	57	12	43

[1] Many of these cases from the interior.

GREAT BRITAIN (SCOTLAND)

Further relative to typhus fever—Glasgow.[1]—Under date of August 3, 1926, seven cases of typhus fever were reported at Glasgow, Scotland. Later information showed that the occurrence was in persons belonging to the same family group and that previous illnesses had occurred in the family, one case about six weeks previous to the appearance of recognized typhus, and one, July 16, which ended fatally. To August 7, 1926, a total of nine cases of typhus was reported in this group.

JAMAICA

Smallpox (alastrim)—Other communicable diseases—June 27 to July 31, 1926.—During the period June 27 to July 31, 1926, 85 cases of smallpox (reported as alastrim) were reported in localities other than Kingston in the Island of Jamaica. Other communicable diseases were reported as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chicken pox	4	11	Tuberculosis	5	68
Leprosy	6	6	Typhoid fever	12	80
Puerperal fever		2	Yaws		15

JAPAN

Cholera—Yokohama—August 25, 1926.—The occurrence of a case of cholera at Yokohama, Japan, was reported August 25, 1926.

[1] Public Health Reports, Aug. 13, 1926, p. 1750, and Aug. 27, 1926, p. 1867.

LATVIA

Communicable diseases—June, 1926.—During the month of June, 1926, communicable diseases were reported in the Republic of Latvia as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	6	Puerperal fever	1
Diphtheria	32	Rabies	4
Dysentery	20	Scarlet fever	199
Erysipelas	30	Tetanus	5
Leprosy	1	Trachoma	51
Measles	186	Typhoid fever	74
Mumps	13	Typhus fever	12
Paratyphoid fever	3	Whooping cough	50

Population, 1,850,000; estimated

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended September 3, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Swatow	July 11-17		15	Stated to be apparently increasing
India				June 20-26, 1926: Cases, 1,212; deaths, 778
Calcutta	July 4-10	39	36	
Rangoon	do	7	11	
Japan				
Yokohama	Aug. 25	1		
Philippine Islands				
Manila	July 11-17	3	1	
Siam				
Bangkok	July 4-10	18	4	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Azores:				
Fayal Island—				
Horta	Aug. 2-8	1	1	
St. Michaels Island	June 27-July 10	3	1	At Arrifes, Furnas, and San Roque
China:				
Amoy	July 11-24	13		Deaths not reported
Nanking	July 4-24			Prevalent
India				June 20-26, 1926: Cases, 464; deaths, 337.
Karachi	July 11-17	1	1	
Madras Presidency	July 18-24	18	12	
Rangoon	July 4-10	1	1	
Japan:				
Yokohama	July 24-30	3	2	Total July 2-Aug. 2, 1926—cases, 9, deaths, 7
Java				
Batavia	July 3-9	6	6	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Brazil:				
Bahia	July 4-10		7	
Para	July 18-31	4	2	
Rio de Janeiro	do.	180	70	
Canada:				
Ontario				Aug. 8-14, 1926: Cases, 6.
Saskatchewan				Aug. 8-14, 1926, 1 case.

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended September 3, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China:				
Chungking	July 11-17			Present.
Hongkong	June 27-July 3	1	1	
Manchuria—				
Dairen	June 28-July 18	3	2	
Harbin	July 15-21	5		
Manchurian Railway stations.	July 18-21	3		
Nanking	July 4-24			Prevalent.
Shanghai	July 11-24	2	2	Cases, foreign; deaths, Chinese and foreign.
Do	July 1, 1925-June 30, 1926.	82	205	Cases, foreign; deaths, native and foreign in International settlement and concessions.
India				June 20-26, 1926: Cases, 3,783; deaths, 1,053.
Bombay	July 4-17	42	22	
Calcutta	July 4-10	8	7	
Karachi	July 18	2		
Madras	do	4	3	
Rangoon	July 4-10	1		
Italy:				
Rome	June 14-20	4		Entire consular district, including Island of Sardinia.
Jamaica				June 27-July 31, 1926: Cases, 85. Reported as alastrim.
Mexico:				
Guadalajara	Aug. 10-16		1	
San Luis Potosi	Aug. 8-14		1	
Netherlands:				
Amsterdam	July 18-24		9	
Persia:				
Teheran	Apr. 21-May 21		7	
Siam:				
Bangkok	July 4-10	15	16	
Union of South Africa:				
Orange Free State	June 27-July 3			Outbreak. On farm.
Transvaal—				
Johannesburg	July 11-17	1		
On vessel:				
Steamship ———	July 2	1		Vessel from Glasgow, Scotland, for Canada. Patient from Glasgow; removed at quarantine on outward voyage. Contact shown with epidemic chicken pox.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Egypt:				
Port Said	July 9-15	3	1	
Great Britain (Scotland):				
Glasgow	July 30-Aug. 7	9		In same family.
Latvia				June, 1926: Cases, 12.
Palestine:				
Haifa	July 13-19	1		
Majdal District	do	1		
Nazareth District	do	3		
Poland				June 6-26, 1926: Cases, 156; deaths, 10.
Union of South Africa:				
Cape Province—				
Glen Grey District	June 27-July 3			Outbreaks.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 27, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr. 18-May 20, 1926. Cases, 31; deaths, 29
China				
Shanghai	Reported July 20	35	8	
French Settlements in India				Mar 7-May 15, 1926. Cases, 19; deaths, 18
India				Apr 25-June 19, 1926. Cases, 17,314, deaths, 10,753.
Bombay	May 30-June 5	1	1	
Calcutta	Apr. 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-July 3	48	46	
Madras	May 16-June 5	2	1	
Rangoon	May 9-June 26	67	44	
Do	June 27-July 3	9	6	
Indo-China:				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-July 3	19	14	
Philippine Islands:				
Manila	May 18 24	2	2	
Do	June 27-July 3	1		
Provinces—				
Albay	Apr 18-24	1	1	
Mindoro	Feb. 21-Mar 6	3	3	
Romblon	Dec 14 31	42	43	
Do	Jan 2-23	16	12	
Siam:				
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-July 3	36	18	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported.
Azores:				
St. Michaels—				
Arrifes	May 9-June 26	2		
Livramento	May 15-29	2	1	
British East Africa:				
Kisumu	May 16-22	1	1	
Uganda	Mar. 1-31	35	34	
Ceylon:				
Colombo	May 29-June 5	1	1	
Chile:				
Iquique	June 20-26		1	
China:				
Amoy	Apr. 18-June 26	40	30	
Do	June 27-July 3	8		
Foochow	June 6-12			Several cases. Not epidemic.
Nanking	May 9-July 3			Prevalent.
Ecuador.				
Guayaquil	May 16-June 30	6		Rats taken, 30,914; found infected, 31.
Do	July 1-15			Rats taken, 10,020, found infected, 8.
Egypt				Jan 1-July 8, 1926: Cases, 100.
City—				
Suez	May 21-July 1	9	5	
Provinces—				
Beni-Suef	May 28-June 8	8	2	
Gharbieh	June 2	1	1	
France				
Marseille	July 8	1	1	Reported July 24.
St. Denis	Reported Aug. 2	1		Vicinity of Paris
Greece:				
Athens	Apr 1-May 31	16	4	Including Piræus.
Patras	May 27-June 12	4	1	
Zante	May 17	1		
Hawaii:				
Paauhau	July 18-24			Plague-infected rat trapped.

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 27, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
India				Apr. 25-June 19, 1926: Cases, 52,537; deaths, 41,249.
Bombay	May 2-June 26	16	15	
Karachi	May 23-June 26	15	13	
Madras Presidency	Apr. 25-June 26	162	93	
Rangoon	May 9-June 26	20	15	
Do	June 27-July 3	2	3	
Indo-China:				
Saigon	May 23-June 26	8	3	
Iraq:				
Baghdad	Apr. 18-June 12	161	108	
Japan:				
Yokohama	July 2-21	6	3	
Java:				
Batavia	Apr. 24-June 19	65	65	
Do	June 20-July 2	12	11	Province.
Cheribon	Apr. 11-24	3	3	
East Java and Madoera	June 13-19	1	1	
Madagascar:				
Ambositra Province	May 1-15	4	4	Septicemic.
Moramanga Province	Apr. 1-15	2	2	Do.
Tananarive Province				Apr. 1-June 15, 1926: Cases, 110; deaths, 111.
Tamatave (Port)	May 16-31	1	1	
Tananarive Town	Apr. 1-May 15	6	0	
Other localities	do	80	77	Bubonic, pneumonic, septicemic.
Nigeria				Feb. 1-Apr. 30, 1926: Cases, 115; deaths, 92.
Peru				May-June, 1926: Cases, 57; deaths, 16.
Departments—				
Ancash	May 1-31			Present.
Cajamarca	May 1-June 30	10	4	
Ica	May 1-31	1		
Libertad	do	4		Pacasmayo, cases, 2; Trujillo district, cases, 2.
Lima	May 1-June 30	29	12	
Piura	June 1-30	13		In Huancabamba district.
Russia				Jan. 1-Mar. 31, 1926: Cases, 37.
Senegal				Nov. 1-30, 1926: Cases, 3; deaths, 2. Mar. 1-Apr. 30, 1926: Cases, 15; deaths, 4.
Siam:				
Bangkok	May 23-June 26	2	2	
Straits Settlements:				
Singapore	May 2-8	1	1	
Syria:				
Beirut	July 1-10	1		
Tunisia	May 11-June 20	150		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan.
Union of South Africa:				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-July 3	1		
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District—				
Protestpan	May 9-22	3	3	

SMALLPOX

Algeria:				
Algiers	May 21-June 30	14		
Do	July 1-10	1		
Bolivia:				
La Paz	May 1-June 30	14	7	
Brazil:				
Bahia	June 20-26	1		
Do	June 27-July 3	1		
Manaos	Apr. 1-30		5	
Para	May 16-June 26	20	28	
Do	June 27-July 17	10	6	
Rio de Janeiro	May 2-June 19	132	91	
Santos	Mar. 1-7		1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 27, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
British East Africa:				
Tanganyika	May 2-22		12	
Uganda	Mar. 1-31	1		
British South Africa:				
Northern Rhodesia	May 18-24	17	6	Natives.
Do	June 8-14	5		
Canada				May 30-June 12, 1926; Cases, 46
Alberta	May 30-June 12	3		
Do.	June 27-July 1	1		
Manitoba	May 30-June 26	24		
Do	June 27-July 24	7		
Winnipeg	June 6-12	5	1	
Do	July 4-17	6		
Ontario				May 30-June 26, 1926 Cases, 36. June 27-Aug 7 Cases, 43.
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2	1	
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2 22	5		
Do	July 25-31	2		
Orillia	Apr 26 May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
Saskatchewan				May 30-June 19, 1926 Cases, 16. June 27-Aug 7 Cases, 36
Regina	July 4-10	2		
Ceylon				Mar 14-May 29, 1926 Cases, 44, deaths, 3
Chile:				
Antofagasta	June 6-12	1		
China:				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Chungking	May 2-July 10			Present
Foochow	do			Do
Hongkong	May 2-June 26	19	10	
Manchuria	July 6-17	10		Railway stations.
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do.	June 27-July 3	1		Do.
Dairen	Apr 26-June 20	69	16	
Fushun	May 16-June 5	4		Do.
Harbin	May 14-June 30	21		Do
Do	July 1-7	2		
Kai-yuan	May 16-June 30	10		Do.
Kungchuling	June 13-19	1		Do.
Liao-yang	May 16-June 30	4		Do
Mukden	do	4		Do.
Penhsihu	May 16-June 19	4		Do
Ssupingkai	May 16-June 30	2		Do
Teshihchiao	do	2		Do.
Wa-fang-tien	do	3		Do.
Nanking	May 8-July 3			Present.
Shanghai	May 2-June 26	10	25	Cases: Foreign. Deaths, population of international concession, foreign and native
Do	June 27-July 10	1	1	
Swatow	May 9-July 10			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshuen	May 1			Prevalent.
Chosen				Mar 1-Apr 30, 1926: Cases, 368; deaths, 85.
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt:				
Alexandria	May 15-July 1	18	8	
Cairo	Jan. 29-Feb. 4	1	1	
Esthonia				May 1-June 30, 1926: Cases, 3.
France				Mar. 1-Apr. 30, 1926: Cases, 92.
St. Etienne	Apr. 18-June 15	7	3	
French Settlements in India	Mar. 7-May 15	205	205	
Gold Coast	Mar. 1-Apr. 30	626	13	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 27, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Great Britain:				
England and Wales				May 23–July 3, 1926: Cases, 1,068. July 4–31, 1926: Cases, 376.
Bradford	May 23–29	1		
Newcastle-on-Tyne	June 6–12	1		
Do	July 11–17	1		
Nottingham	May 2–June 5	7		
Sheffield	June 13–19	1		
Do	July 4–10	1		
Greece:				
Saloniki	June 1–14		3	
Guatemala:				
Guatemala City	June 1–30		2	
India				Apr. 25–June 19, 1926: Cases, 51,068; deaths, 13,718.
Bombay	May 2–June 26	220	134	
Do	June 27–July 3	12	8	
Calcutta	Apr. 4–May 29	171	152	
Do	June 13–26	24	18	
Do	June 27–July 3	5	5	
Karachi	May 16–June 26	44	18	
Do	June 27–July 10	6	4	
Madras	May 16–June 26	7	4	
Do	June 27–July 10	2		
Rangoon	May 9–June 26	10	5	
Indo-China:				
Saigon	do	2		
Iraq:				
Bagdad	do	8	3	
Do	July 4–10	1	1	
Basra	Apr. 18–June 22	34	25	
Italy				Mar. 28–June 5, 1926: Cases, 26.
Jamaica				Apr. 25–June 26, 1926: Cases, 201. (Reported as alastrim.)
Japan				Apr. 11–May 29, 1926: Cases, 564.
Kobe	May 30–June 5	1		
Nagoya	May 16–22		1	
Do	July 4–10	1		
Taiwan Island	May 11–20	24		
Do	June 1–20	23		
Tokyo	June 26–July 3	2		
Yokohama	May 2–8	2		
Java:				
Batavia	May 15–June 25	2		Province.
East Java and Madoera	Apr. 11–June 19	78	5	
Malang	Apr. 4–10	6	1	Interior.
Surabaya	May 16–22	14	1	
Latvia				Apr. 1–30, 1926: Cases, 3.
Mexico				Feb. 1–Mar. 31, 1926: Deaths, 602.
Aguascalientes	June 13–26		5	
Guadalajara	June 8–14		2	
Do	June 29–Aug. 9		4	
Mexico City	May 16–June 5	3		Including municipalities in Federal District.
Saltillo	July 18–24		1	
San Antonio de Arenales	Jan. 1–June 30			Present: 100 miles from Chihuahua.
San Luis Potosi	June 13–26		7	
Do	July 4–Aug. 7		8	
Tampico	June 1–10		2	
Torreon	May 1–June 30		17	
Do	July 1–31		5	
Nigeria				Feb. 1–Apr. 30, 1926: Cases, 404; deaths, 33.
Peru:				
Arequipa	June 1–30		1	
Poland				Mar. 28–May, 1926: Cases, 12; deaths, 1.
Portugal:				
Lisbon	Apr. 26–June 19	10	3	
Oporto	May 23–June 5	4		
Do	July 11–24	2		
Russia				Jan. 1–Mar. 31, 1926: Cases, 2,103.
Siam:				
Bangkok	May 2–June 12	23	20	
Straits Settlements:				
Singapore	Apr. 25–May 1	1		
Switzerland:				
[illegible] Canton	June 1–30	1		
[illegible]				Apr. 1–June 30, 1926: Cases, 17.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 27, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				
Cape Province	June 20-26			Outbreaks
Idutya district	May 23-29			Do
Orange Free State	June 20-July 3			Do
Natal	May 30-June 5			Do
Transvaal				June 6-12, 1926. Outbreaks in Pietersburg and Rustenburg Districts
Johannesburg	May 9-June 12	5		
Yugoslavia				Apr. 15-30, 1926. Cases, 2; deaths, 1
On vessel				Three cases, 1 death, at Aden, Arabia, stated to have been imported by sea
S. S. Karapara				At Zanzibar, June 7, 1926. One case of smallpox landed. At Durban, Union of South Africa, June 16, 1926. One suspect case landed

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Argentina				
Rosario	Feb. 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Bulgaria				Mar. 1-Apr. 30, 1926. Cases, 64; deaths, 12.
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Valparaiso	Apr. 29-May 5		1	
China				
Antung	June 14-27	7	1	
Do	June 28-July 18	14	1	
Canton	May 1-31	1		
Ichang			1	Reported May 1, 1926. Occurring among troops
Wanhsien				Present among troops, May 1, 1926. Locality in Chungking consular district
Chosen				Feb. 1-Apr. 30, 1926. Cases, 640; deaths, 66
Chemulpo	May 1-June 30	38	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Czechoslovakia				Jan. 1-May 31, 1926. Cases, 154; deaths, 4
Egypt:				
Port Said	June 4-24	4	1	
Cairo	Jan. 29-Feb. 18	8	4	
Great Britain:				
Scotland—				
Glasgow		7		Reported Aug. 3, 1926
Ireland (Irish Free State):				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerry County—				
Dingle	June 27-July 3	1		
Italy				Mar. 28-May 8, 1926. Cases, 3
Japan				Mar. 28-May 29, 1926. Cases, 37
Latvia				May 1-31, 1926. Cases, 7
Lithuania				Mar. 1-May 31, 1926. Cases, 172; deaths, 21
Mexico				Feb. 1-Mar. 31, 1926. Deaths, 73.
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal District.
Do	June 13-19	9		Do
San Luis Potosi	June 13-26			Present, city and country.
Morocco				Mar. 1-May 31, 1926. Cases, 414.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to August 27, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Palestine				March, 1926: Cases, 6. Exclusive of Bedouin tribes and the British military forces.
Gaza	July 6-12	1		
Jaffa District	June 15-28	5		
Peru:				
Arequipa	Jan. 1-31		2	
Poland				Mar. 28-June 5, 1926: Cases, 1,116; deaths, 75.
Rumania				Mar. 1-Apr. 30, 1926, Cases, 305; deaths, 19.
Russia				Jan. 1-Mar. 31, 1926: Cases, 11,814.
Tunisia				Apr. 1-June 30, 1926. Cases, 110.
Tunis	June 11-30	3		
Turkey.				
Constantinople	June 16-22	1		
Union of South Africa				Apr. 1-May 31, 1926. Cases, 153; deaths, 19.
Cape Province				Apr. 1-May 31, 1926: Cases, 116; deaths, 15. Native.
Do	May 31-July 3			Outbreaks.
Grahamstown	do	1		Sporadic.
Natal				Apr. 1-May 31, 1926; Cases, 17, Native.
Orange Free State				Apr. 1-May 31, 1926, Cases, 15; deaths, 1.
Do	June 6-12			Outbreaks.
Transvaal				Apr. 1-30, 1926. Cases, 3; deaths, 3. Native.
Walkkerstroom district	June 20-26			Outbreaks.
Wolmaransstad district	do			Do.
Yugoslavia				Apr. 15-June 30, 1926: Cases, 48; deaths, 7.
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26.			Present in interior of Bahia, Pirapora, and Minas.
Bahia	May 9-29	4	3	
Do	June 6-26	6	4	
Gold Coast	Apr. 1-10	3	1	

TREASURY DEPARTMENT

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VOLUME 41 :: :: NUMBER 37

SEPTEMBER 10 - 1926

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1926

...ED STATES PUBLIC HEALTH SERVICE

HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst. Surg. Gen. B. J. LLOYD, *Chief of Division*

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PUBLIC HEALTH REPORTS

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THE RADIOACTIVITY OF NATURAL WATERS

By W. D. Collins, Chemist in Charge, Quality of Water Division, United States Geological Survey

Every natural water is more or less radioactive, and therefore the recognition of the presence of a small amount of radioactive material in any spring water does not set that water apart from other natural waters.

Knowledge of the presence of radioactive substances in waters is comparatively recent. Therefore, the radioactivity has been seized as something to talk about and advertise as a remarkable and unique property of many waters which are no more unique in their radioactivity than they are in their wetness.

Physicians and others who have given thought to the subject have long recognized that, in general, much better results are obtained from the use of mineral waters at their sources than from the use of the same waters after they have been shipped in bottles. The common explanation has been that at resorts more water is taken, and at the same time the diet and other living conditions of the patient are better regulated than at home. Even without special medical attention at the resort there is usually rest, recreation, and freedom from the normal cares of life.

When radioactivity was first studied and it was found that many famous medicinal waters contained radium emanation, this fact was immediately taken as an explanation of the greater benefits derived from the use of the waters at their sources. The radium emanation is half gone in about 3.8 days after the water has been taken from its source and practically all gone within 30 days. So far the explanation seems reasonable. The first determinations of radioactivity of natural waters were nearly all made on samples from well-known springs. Later studies brought out great differences in the radioactivity of waters that seemed to produce identical beneficial effects and also showed radioactivity to be a universal property of natural water. As the use of radium emanation in the treatment of disease was developed, it appeared that the doses necessary to produce detectable effects could not be obtained by drinking any reasonable quantity of one of the naturally radioactive spring waters; of most waters it would be necessary to drink from 100 to 1,000 gallons a day.

In New and Nonofficial Remedies, 1925, page 308, it is stated that the Council on Pharmacy and Chemistry of the American

Medical Association will not accept any radium solution for internal use the dosage of which is less than 2 micrograms a day, or any radium emanation generator which yields less than 2 microcuries of emanation during each 24 hours.

To obtain the dose of 2 micrograms by drinking 1 gallon of water, which is considerably more than most people drink in a day, the radioactivity of the water would have to be about 500 millimicrocuries[1] per liter. As long ago as 1913 Lazarus, in his Handbuch der Radium-Biologie und-Therapie, stated (p. 200) that, in the use of waters having less than 20 millimicrocuries of radioactivity per liter, the radioactivity probably has no appreciable part in the beneficial effects obtained. It thus appears that the radioactivity should be between 20 and 500 millimicrocuries per liter in order to be considered at all as a factor in the use of a water as medicine, and that even within these limits the radioactivity is not likely to be the controlling factor.

In 1905 Boltwood[2] reported the radioactivity of waters from a group of 44 springs which have been used medicinally for bathing or drinking. The radioactivity ranged from 0.016 to 8.8 millimicrocuries per liter and only two had over 2.5 millimicrocuries per liter. Half of the results were between 0.1 and 0.5. Schlundt and Moore[3] found less than 0.5 millimicrocurie per liter for 40 out of 88 springs in Yellowstone National Park; the maximum reported was 2.68 millimicrocuries per liter.

Measurements by the writer quoted by Skinner and Sale[4] in a discussion of the radioactivity of miscellaneous waters examined in the Bureau of Chemistry gave results ranging from 0.007 to 1.1 millimicrocuries per liter for 15 samples of spring waters collected in 1911, 1912, and 1914 in Virginia, Wisconsin, and Massachusetts. Some of these samples were taken from widely known springs.

The text by Lazarus noted above contains an article by Sommer which gives results of measurement of radioactivity of 422 waters from springs in Germany. The radioactivity of 72 per cent of these waters was reported as less than 2.5 millimicrocuries per liter.

Moore and Whittemore[5] measured the radioactivity of 14 waters at Saratoga Springs, N. Y., and found from 0.039 to 0.88 millimicrocurie per liter. Satterly and Elworthy[6] report the radioactivity of waters from 23 wells and 47 springs in Canada. The results range from

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[1] A millimicrocurie is the radioactivity corresponding to one-billionth of a gram of radium (0.000000001 gram). This unit is used in discussions of the radioactivity of natural waters because results expressed in it are numbers of moderate size. Some reports have been made in units of one-tenth to one-thousandth of a millimicrocurie, but all the results quoted in the present discussion have been converted to millimicrocuries.

[2] Am. Jour. Sci., 4th ser., vol. 20, pp. 128-32, 1905.

[3] U. S. Geol. Survey Bull. 395, 1909.

[4] Jour. Ind. and Eng. Chem., vol. 14, pp. 949-956, 1922.

[5] Jour. Ind. and Eng. Chem., vol. 6, pp. 552-553, 1914.

[6] Canada Dept. Mines, Mines Branch, Bull. 16, 1917.

1

0.0014 to 0.176 millimicrocurie per liter for the well waters and from 0.0112 to 0.64 for the spring waters.

Measurements by O. C Lester of the radioactivity of 178 mineral waters of Colorado are given in Bulletin 11 of the State Geological Survey, published in 1920. The results range from "none" to 30 5 millimicrocuries per liter. The report "none" signifies only that no radioactivity was detected with the apparatus used and does not indicate the complete absence of radioactivity. Of the waters with measurable radioactivity 85 per cent had less than 2 5 millimicrocuries per liter, 14 per cent from 2.5 to 5, and 6 per cent from 5 to 30.

Other results quoted by the authors cited above serve to show the almost universal radioactivity of natural waters as they occur in the ground and the exceedingly small quantities of radioactivity in even the most radioactive of these waters when compared with the quantities which those who have studied the subject consider necessary to produce any therapeutic effect

The best available evidence based on scientific studies of the treatment of disease with radium emanation, on measurements of radioactivity of natural spring waters, and on the reported uses of the spring waters, leads to the conclusion that, up to this time, it has not been shown that the small amounts of radioactivity found in natural waters have any effect on the medicinal value of the waters.

THE PHYSIOLOGICAL EFFECTS OF CURRENTS OF VERY HIGH FREQUENCY (135,000,000 TO 8,300,000 CYCLES PER SECOND)

By J W SCHERESCHEWSKY, Surgeon, United States Public Health Service

This paper reports the results of studies of the effects upon small laboratory animals (mice) of electrical oscillations of very high frequency generated by a vacuum tube oscillator.

The modern development of the vacuum tube oscillator and associated circuits permits the generation of continuous wave currents of relatively pure wave form of very high frequency, sharply emitted at the frequency to which the circuit is tuned. This is not the case in the usual type of high frequency apparatus used for therapeutic purposes. Here, the oscillations are produced by condenser discharge across a spark gap. The oscillations produced in this way have a large decrement, the wave form is impure, giving rise to many harmonics; the emitted wave is broad, and consistent operation at the frequencies worked with in the studies here reported is difficult to obtain. Moreover, the oscillations generated are in the form of discontinuous trains separated by a period during which the upbuilding of energy for the next train occurs.

The physiological effects of high frequency currents generated by the vacuum tube oscillator appear to have been but little investigated.

The only reference found by a search through the literature was a report by Gosset, Gutmann, Lakhovsky, and Magrou [1] on the effects of very high frequency radiation emitted by a vacuum tube oscillator upon plant tumors caused in the geranium by *Bacterium tumefaciens*.

The authors report that three geranium plants, bearing tumors caused by inoculation with the above-mentioned organism, were exposed to radiations emitted by a vacuum-tube oscillator at a frequency said to be about 150,000,000 cycles per second. One plant was given 2 exposures of three hours on consecutive days, one plant 3, and one plant 11 such exposures. After 16 days from the first exposure, the tumors, after growing in the interval, began suddenly to necrose. The necrotic process was said to be complete in about 15 days, so that the tumor could be detached by slight traction. In 16 control plants the tumors grew rapidly to enormous size and recurred after surgical excision. Details, however, as to the apparatus and method of exposure are lacking.

In the studies here reported the first step was a study of oscillators which might generate oscillations of sufficiently high frequency and the development of suitable auxilliary circuits in which the effects of such currents on small laboratory animals (mice) might be investigated.

At this point it is desired to express grateful acknowledgment to Prof. George W. Pierce and E. L. Chaffee, of the Cruft High Tension Laboratory of Harvard University, for permitting the use of the facilities of the Cruft High Tension Laboratory in the preliminary work and for much helpful advice; also to Mr. M. L. Dow and Mr. F. H. Drake, of the same laboratory, for collaboration, valuable assistance, and advice in the working-out, construction, and setting-up of apparatus and in making preliminary runs and tests.

Further grateful acknowledtment is made to Prof. M. J. Rosenau, of the Department of Preventive Medicine and Hygiene of the Harvard Medical School, for the use of the facilities of his department in the subsequent work. It is also desired to thank the General Electric Co. for furnishing three special vacuum tubes of low internal capacity.

Description of Apparatus

Vacuum tube oscillator. After considerable preliminary work in testing the suitability of various types of oscillators, the following types of circuit were settled upon as satisfactory:

For the generation of the highest frequency currents employed, (i. e., from 200,000,000 cycles to 60,000,000 cycles per second) the type of oscillator described by Huxford [2] was found excellently

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[1] A. Gosset, A. Gutmann, G. Lakhovský, and I. Magrou. Essai de Therapeutique du "Cancer Experimental" des Plantes. Comptes Rendus de la Société de Biologie, Vol 91, 1924, pp 626-628.

[2] Huxford, W. S. Standing Waves on Parallel Wires. Physical Review, Corning, N. Y., 2nd series, Vol. 25, 1925, pp. 686-695.

adapted. In the design of circuits intended to oscillate at these high frequencies, the interelectrode capacity of the tube, negligible at low frequencies, becomes an important limiting factor on the frequency of the oscillations generated. In Huxford's circuit the capacity formed by the tube elements is in series with the variable tuning capacity. Because of well-known physical considerations, this has the effect of reducing the minimum capacity at which the oscillating circuit may be resonated, and thus permits the generation of frequencies

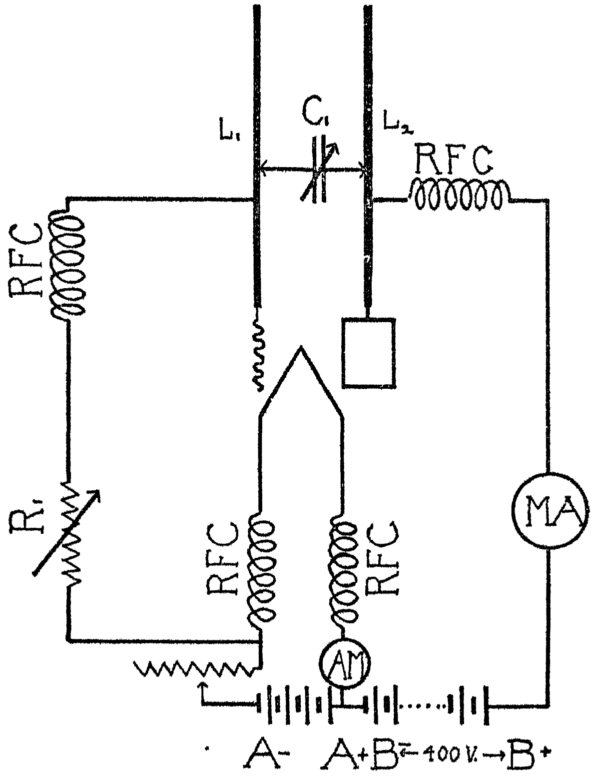


FIG 1—Circuit of oscillators Nos 1 and 2 (Huxford circuit)
L_1, Grid inductance
L_2, Plate inductance
C_1, Tuning condenser
RFC, Radio-frequency choke-coils
MA, Plate millammeter
AM, Filament ammeter
R, Variable resistance (10,000–200,000 ohms)

higher than would be possible with a tube having a given interelectrode capacity, were this capacity in shunt with the tuning capacity as is the case, for instance, in the well-known Hartley circuit.

Two oscillators of the type described by Huxford were constructed, one having a range of from about 200,000,000 cycles to 85,000,000 cycles and the other with a range of 150,000,000 cycles to 60,000,000 cycles per second. Figure 1 shows the circuit network and the accompanying photographs show the appearance of the oscillators,

Reference to the diagram and photograph of oscillator No. 1 (Pl. I) shows that the tuning inductance consists essentially of two parallel brass rods 21 centimeters long, 4.7 millimeters in diameter, and spaced 5 centimeters, supported at each end by vertical bakelite strips. At the vacuum tube end the upper rod is connected to the grid, while the lower is connected to the plate of the tube. This lower rod is revolubly mounted and serves as a support for the rotary plate of the tuning condenser which is mounted on the rod by means of a sleeve and set-screw, so that it may be moved and fixed at any point on the lower rod. The upper rod, which is not revoluble, carries the stator portion of the tuning condenser. This is suspended from a small brass block, bored to a sliding fit upon the upper rod and secured by a set-screw so that it may be appropriately located with respect to the rotary plate. The stator portion of the condenser consists of two plates spaced 3.1 millimeters from each other, with a radius of 4.7 centimeters The rotary plate has a radius of 3.75 centimeters.

This arrangement of the tuning condenser which permits it to be slid to different sites along the rods is an important means of varying the oscillator frequency, as the range obtained by varying the condenser alone, at any one position on the rods is rather narrow. To get the benefit of the full range of frequencies of which the oscillator is capable, it is necessary to alter the value of the inductance in the oscillating circuit. This is done by sliding the rotor and stator portions of the condenser to different sites along the rods, the inductance in the circuit being a maximum when the condenser is slid as far away from the tube as possible. The farther ends of the rods are connected through suitable choke-coils to the filament and to the plate battery, respectively, the upper rod being connected to the negative filament through a variable resistance. The resistance used was a Bradley, variable between the values of 10,000 and 200,000 ohms. In the circuit, as described by Huxford, no resistance was employed; but in this instance its use appeared to add stability and efficiency, besides, because of its biasing action, reducing consumption of plate current and undue heating of the plate.

As shown in the diagram, the oscillating current was confined to the oscillating circuit by the use of suitable choke coils. These were four in number and were located, one in each leg of the filament, one at the outer end of the lower rod between it and the plate supply, and one at the outer end of the upper rod between this and the grid-biassing resistance. In oscillator No. 1 these choke coils consisted of 23 turns of No. 20 D. C. C. wire wound in a spiral 1.25 centimeters in diameter, each turn being slightly spaced from the next. They were readily made by winding the required number of turns tightly around a ⅛-inch rod and then slipping them off, the small diameter of the coil and the natural stiffness of the wire rendering

the coils self-supporting. While 23 turn coils were used and found to work well, this number is by no means critical. It could probably be varied several turns in either direction without changing results.

Oscillator No. 2 was a duplicate, in constructional details, of the first oscillator, except for larger dimensions. The rods were 38 centimeters long and spaced 11.5 centimeters instead of 5 centimeters. The tuning condenser, too, was larger, having five instead of three plates. Because of the wider spacing of the rods, it was necessary to make the brass block which carried the stator of the condenser considerably longer than in the smaller model

It will be noted, from the photograph, that, in the smaller oscillator, no socket for the tube was used, the tube being mounted by inserting the base, until stopped by the pin, in a hole of proper diameter, in a horizontally mounted bakelite strip. The plate, grid, and filament leads were then soldered directly to their respective tube prongs. This was done to avoid introducing unnecessary capacity in the circuit through the use of a socket. In the other oscillators, however, where lower frequencies were generated, this precaution was needless; consequently, for the sake of convenience, a socket was employed.

The vacuum tube used for the generation of high-frequency current was the UX 210. This tube has a thoriated filament, is rated at 7.5 watts, is used with a maximum filament current of 1.25 amperes at 7.5 volts. The plate potential employed was 400 volts, furnished by a suitable number of 6,000 m. a.-hour lead storage-cells.

This tube was found to oscillate vigorously in the circuit just described up to a frequency of 158,000,000 cycles. At this point the internal capacity of the tube and the inductance of its leads were so great that oscillations of higher frequency could not be obtained. However, by the use of the special tubes (shown in Plate II) having a low internal capacity, which were obtained from the research laboratories of the General Electric Co., with the smaller oscillator it was possible to generate effective oscillations of a frequency around 200,000,000 cycles per second, and feebler ones of possibly 230,000,000 cycles.

As shown by the photograph, this tube has the filament and plate leads brought out at the lower end of the tube while the grid lead is brought out at the top. This reduces the capacity between leads within the tube which, in the ordinary type of mounting, may be several micromicrofarads.

Measurements of the internal capacity of this tube made at 1,000 cycles on the Cruft Laboratory capacity bridge showed this to be between 3 and 4 micromicrofarads, less than one-half that of a standard UV 202, 5-watt tube.

While the tubes, when received, were provided with bases, these were removed, by heating, before use so as to reduce the tube capacity to a minimum.

It was found that the generation of these high frequencies was very hard on the tubes, it being necessary, in order to secure adequate output, to increase the filament and plate currents considerably beyond the normal standard. This resulted in burn-outs, cracking of seals, and, in the case of the UX 210 tube, of depletion of electron emission beyond the possibility of reactivation.

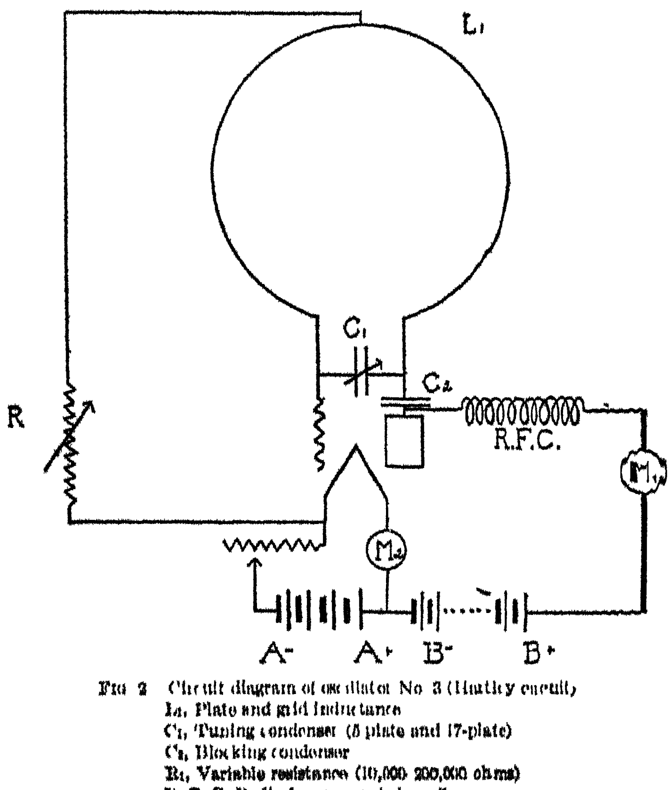
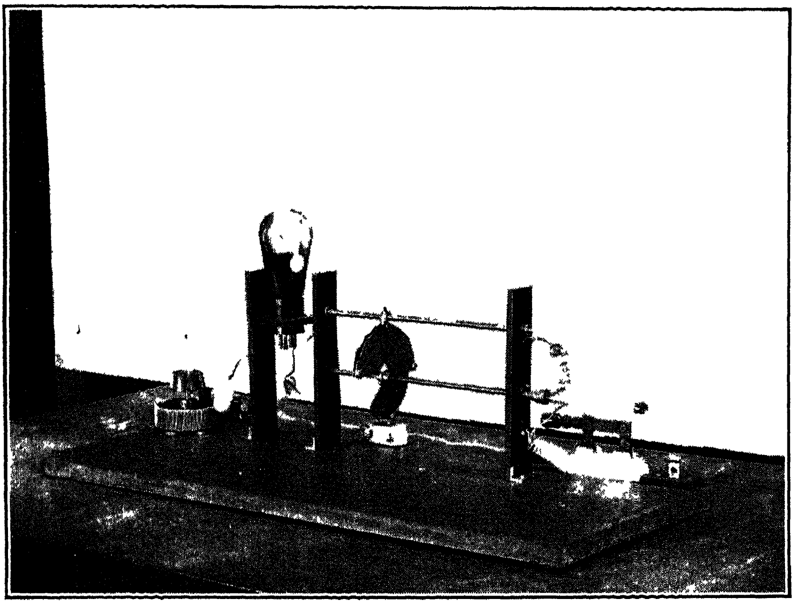
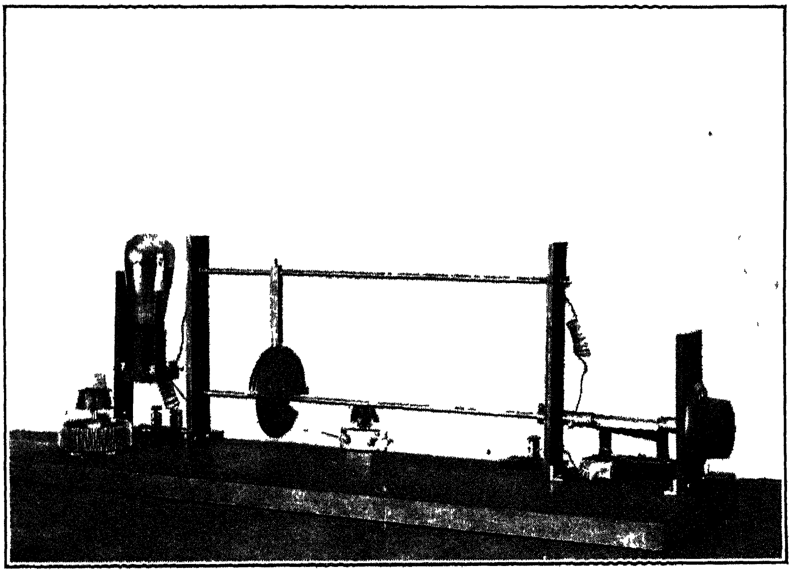


FIG 2 Circuit diagram of oscillator No 3 (Hartley circuit)
L_1, Plate and grid inductance
C_1, Tuning condenser (5 plate and 17-plate)
C_2, Blocking condenser
R_1, Variable resistance (10,000-200,000 ohms)
R. F. C, Radio-frequency choke-coil
M_1, Plate milliammeter
M_2, Filament ammeter

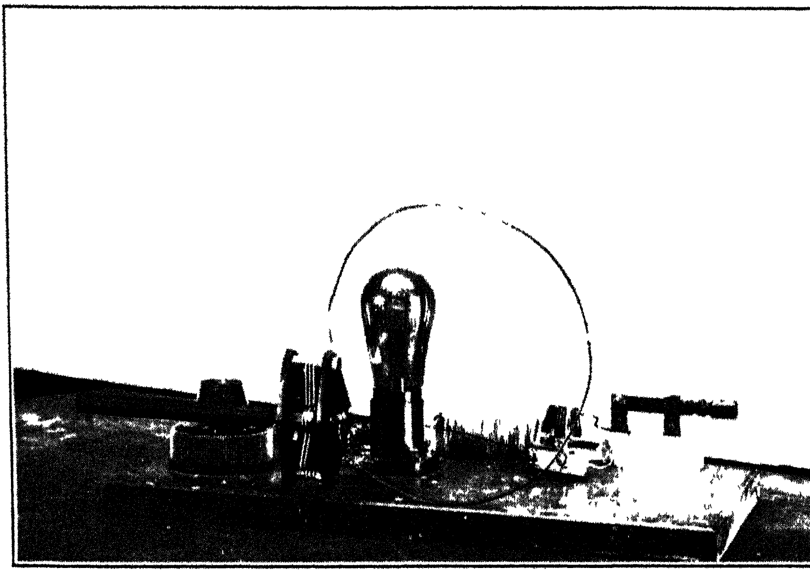
For frequencies of 60,000,000 cycles per second and less it was no longer found necessary to use the type of oscillator just described, which, though reliable and stable in operation, nevertheless, because of limited range was not as well suited to the exploration of the lower frequencies, as the ever useful and efficient Hartley circuit. Consequently, for these lower frequencies, the latter circuit with parallel plate feed, through a choke coil, was employed as shown in Figure 2 and the accompanying photograph.



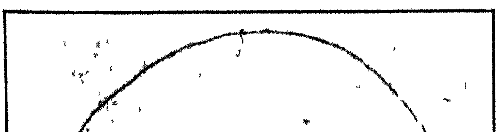
Oscillator No 1 (Huxford circuit) Range 230,000,000 to 85,000,000 cycles



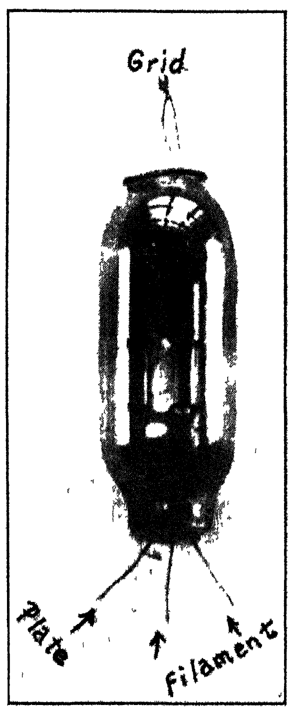
Oscillator No 2 (Huxford circuit) Range 150,000,000 to 60,000,000 cycles



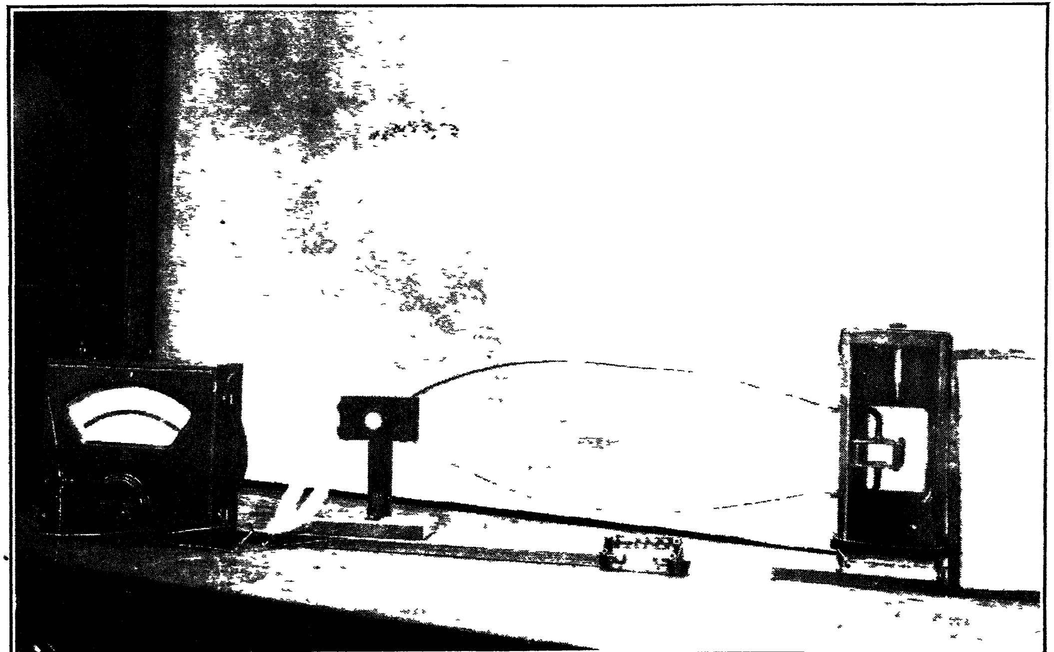
Oscillator No 3 (Hartley circuit). Range 50,000,000 to 23,000,000 cycles



Oscillator No. 3 (Hartley circuit). Range 20,000,000 to 7,250,000 cycles



Special 5-watt vacuum tube with low internal capacity



Auxiliary-coupled circuit showing mouse holder, thermocouple, and microammeter

For the inductance, single turn loops of No. 14 to No. 4 wire were used according to size and the need for rigidity. These loops, as shown in the photograph, were supported on the tuning condenser (a low-priced 5-plate affair with bakelite end plates which was found to function as satisfactorily as one of the most expensive "low loss" construction).

For frequencies below 12,000,000 cycles, however, a high-grade 17-plate condenser was used. The plate-blocking condenser, a Dubilier micadon, had the value of .00025 mfds. The filament return was taken off the mid-point of the tuning inductance, the connection to the negative filament being made, as in the case of the other oscillators, through a variable Bradley resistance, the usual resistance values used being from 10,000 to 15,000 ohms.

Choke coils of several sizes were inserted in the plate feed, larger choke coils being used for the lower frequencies. As in the case of the oscillators previously described, these consisted of a self-supporting spiral of No. 18 or No. 20 D. C C. wire, the number of turns varying from 23 to 65 or 70 and the diameter from 2.5 to 4 centimeters, the turns being spaced about the diameter of the wire.

With this type of oscillator, simply by varying the diameter of the single turn used as the inductance, with the 5-plate condenser it was possible to go from 66,000,000 cycles per second (using a 6-centimeter loop) to 10,000,000 cycles per second (using a turn of No. 4 copper wire 76 centimeters in diameter). With a single turn loop 32 centimeters in diameter tuned by a .00035 mfd. condenser, frequencies as low as 7,500,000 cycles could be readily generated.

In all the oscillators the filament temperature was controlled by a 2-ohm rheostat. A Weston ammeter in the filament circuit and a Weston 0-300 milliammeter in the plate circuit indicated the filament and plate currents, respectively. The latter instrument was placed in the negative plate-battery lead and was protected by the insertion of a short strip of ¼-ampere fuse wire.

It was generally found that, for adequate output, the necessary plate current was considerably greater at the higher than at the lower frequencies. At the highest frequencies, during some of the runs, plate current readings of from 100–120 milliamperes were not unusual, but at the lower frequencies from 50 to 80 milliamperes was the usual value.

Frequency determination.—For the purpose of ascertaining the frequency at which the oscillator was operating, use was made of a Lecher parallel wire system. This consisted of two No. 12 parallel copper wires 7.5 centimeters apart and 11 meters long, stretched from standards 20 centimeters above the level of the workbench. Turnbuckles at one end of the wire system served to tighten the wires.

The slider was a rectangular piece of 22-gauge brass plate 12.5 by 8 centimeters, provided with two parallel slots 7 centimeters long and 7.5 centimeters apart to enable it to engage the wires. Supporting sliders of bakelite, grooved to fit the wire and attached front and rear steadied the slider plate, enabling it to travel smoothly. A waxed string passing over pulleys attached to the standards allowed the slider to be moved to any position from the operator's location. A plumb bob suspended by a waxed thread from the slider indicated its position with respect to a wave-length scale laid out on the workbench beneath. Resonance of the wire system with the oscillator frequency was indicated by a Weston thermogalvanometer connected across the oscillator end of the wires.

In a system of this character, as is well known, standing waves are formed on the parallel wire system in a series one-half wave in length between nodes. If the slider is placed at one of these nodes the wave will travel along the wires to the slider and be reflected back, the total distance traveled being equal to the distance between wave crests, and therefore corresponding to the wave length. When the slider is located in this fashion at a node the meter will show the maximum deflection.

The system is readily calibrated by setting the oscillator at some frequency sufficiently high to permit the development of several successive nodes on the wire system, moving the slider to each of these points in succession and measuring the interval between them; and averaging the measurements which will be found to differ from each other by less than a centimeter. In this way orientation points on the wave-length scale are readily located from which the wave-length scale may be laid out, the wave-length measured, and hence the frequency determined.

Although, owing to the capacity between the wires and also to the surface of the bench, a slight error is introduced, so that the apparent frequency is slightly higher than the actual, still this method of measuring the wave length, and consequently the frequency, is remarkedly accurate, the error probably being one-half of 1 per cent or less.

Since available space permitted a wire system only 11 meters long, wave lengths only up to approximately 21 meters, or frequencies somewhat less than 15,000,000 cycles, could be directly measured. For lower frequencies a wave meter was employed. This consisted of a loop 32 centimeters in diameter made of ⅛-inch brass rod and a high grade .00035 mfd. condenser in series therewith, resonance being indicated either by the lighting of a low-resistance flash lamp bulb in series with the loop and condenser, or by observing the deflection of the plate-milliammeter needle of the oscillator at the reso-

nance point. This latter method was preferred because of the sharpness of the reaction.

This wave meter was calibrated at the Cruft High Tension Laboratory by comparison with the Cruft Laboratory precision wavemeter for this range of frequencies which, in turn, had been calibrated against a quartz-crystal controlled oscillator [3]

Utilization of oscillator output.—In studying the effects of the oscillator output at various frequencies upon laboratory animals it would obviously be inexpedient to make use of any conductive arrangement, as the constants of the oscillating system would thereby be seriously disturbed. In these studies, therefore, the effects of of these high frequency currents upon animals were investigated by the use of a tuned circuit which was inductively coupled to the oscillator.

As shown in the circuit diagram (fig. 3) and photograph (Pl. III), this tuned circuit consisted of a single-turn wire loop, having a thermocouple (to measure the current) inserted at its mid-point and a capac-

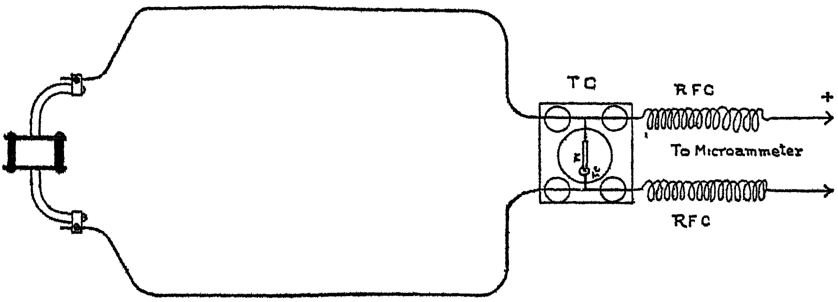


FIG 3.—Auxiliary-tuned circuit and thermocouple

ity consisting of a pair of rectangular brass plates 7.4 by 4.3 centimeters, 2 centimeters apart. The separation of the plates was rigidly fixed by means of four ¼-inch hard-rubber posts each 2 centimeters long at each corner of the plates. Since it was determined to study the action of the electrostatic field between the condenser plates, to avoid any conductive transfer of energy the inner surface of each condenser plate was covered with a celluloid sheet 0.004 inch in thickness. The subject for experimentation (a mouse) was placed in a small celluloid box with perforated sides (see Pl. III) and inserted between the condenser plates where it fitted snugly.

The dimensions of the condenser given above were not the result of any calculation, but were determined by the size of the celluloid box which was designed to hold a 20–22 gram mouse comfortably without, at the same time, permitting it to turn and twist too freely. The box consisted of two pieces of stout celluloid for the top and bottom, held

[3] See Piezoelectric Crystal Resonators and Crystal Oscillators Applied to the Precision Calibration of Wave-meters. By George W. Pierce. Proceedings of the American Academy of Arts and Sciences, vol. 59, No. 4.

apart by ¼-inch hard-rubber posts to which they were secured by short screws in holes tapped at each end of the posts. The sides of the box were covered in with strips of stout celluloid perforated with numerous ⅛-inch holes for ventilation, glued to the hard-rubber posts by means of cellulose varnish.

While mice of from 19–22 grams in weight fitted snugly in the box, so that they could indulge in but moderate twisting and turning about, still, confinement in the box was apparently not uncomfortable per se, as mice frequently went to sleep when undisturbed. Confinement in the box of several hours' duration was without effect upon mice.

The capacity of the condenser without mouse or mouse holder was found to be 1.1 micromicrofarads. Putting the empty mouse holder in place increased the capacity to 8.1 micromicrofarads. With a 20-gram mouse in the holder the capacity increased to 16.1 micromicrofarads. These measurements were made at 1,000 cycles on the Cruft Laboratory capacity bridge. The capacity of the condenser with mouse holder and mouse was, therefore, about four times greater than the capacity with air alone as the dielectric.

Current measurement.—The amount of oscillating current induced in the auxiliary-tuned circuit was measured by means of a platinum-tellurium thermocouple which was constructed for the writer by Mr. F. H. Drake, of Cruft Laboratory. This consisted of a bit of tellurium supported upon a piece of 22-gauge nickel wire to which it was fused. This in turn was soldered to a short piece of No. 18 copper wire. A piece of 7-mil. platinum wire was rolled to a ribbon approximately 1 mil. in thickness. A piece of this about 1 centimeter long was soldered at one end to a short piece of 18-gauge copper wire, while the other end was made somewhat pointed by means of shears. The pieces of copper wire to which, respectively, the platinum ribbon and the tellurium were attached were mounted vertically, through holes in which they were a tight fit, on a stout piece of bakelite at such distance apart that the pointed end of the platinum ribbon fell naturally about on the center of the tellurium fragment. Upon passing direct current regulated by a variable resistance from a 6-volt storage battery, the platinum ribbon was heated to redness. The tellurium fused at the point of contact and thus became solidly welded to the platinum ribbon. A cap fitted over the thermocouple protected it from the effect of air currents. The circuit diagram of the thermocouple is shown in Figure 3.

It will be seen that the thermocouple is connected across two conductors, two ends of which form part of the auxiliary-tuned circuit, the other ends being connected through choke coils to the plus and minus posts of a Rawson microammeter. This instrument had a resistance of 52 ohms and a full scale reading of 120 microamperes.

The resistance of the thermocouple was found to be 0.3 ohms at 1,000 cycles.

The thermocouple was calibrated on 60-cycle A C. by noting the scale reading of the microammeter for various current values as determined by the voltage drop across standard resistances measured by a Rawson vacuum thermocouple voltmeter The full scale read-

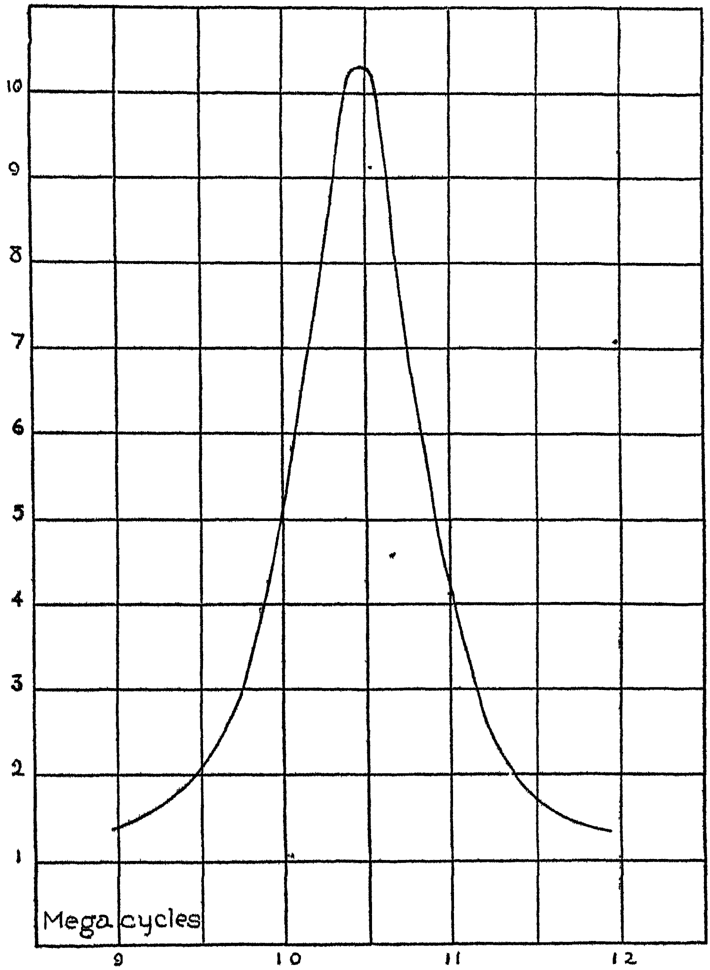


FIG 4.—Resonance curve of auxiliary-tuned circuit with 20-gram mouse. Peak at 10.42 megacycles

ing of 120 on the microammeter corresponded to 0.61 amperes. At 5 on the scale the current was 0.139 amperes.

The calibration of this thermocouple was checked at frequent intervals throughout the study and remained unchanged.

Tuning the auxiliary circuit.—Since the output of the oscillator was applied to the experimental animals, by means of the current

induced in the auxiliary circuit placed in inductive relation to the oscillator the first step in any experiment was, of course, to tune the coupled circuit to the oscillator frequency so that the current in this circuit should be a maximum. To do this, a mouse immediately after death by gas was placed in the celluloid box and inserted between the condenser plates. A loop was then formed by joining with

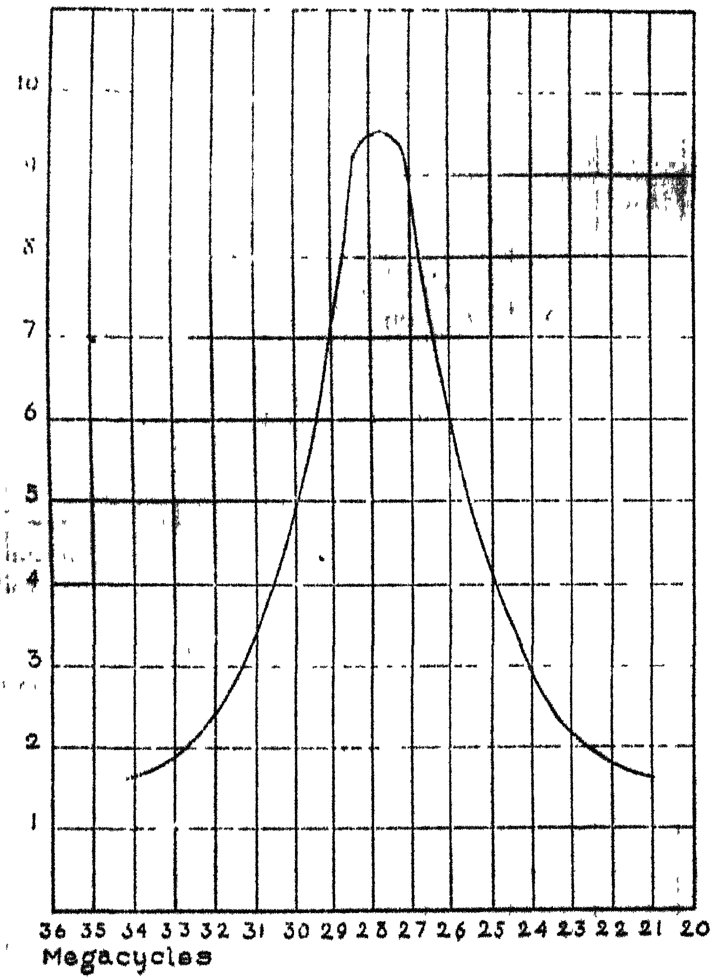


FIG. 5. Resonance curve of auxiliary-tuned circuit with 20-gram mouse. Peak, 28.4 to 27.2 megacycles

two pieces of stiff wire the high frequency terminals of the thermocouple with the corresponding condenser terminals. As a first approximation the length of wire was arbitrarily chosen at a value which experience showed to be about the length desired. Then by starting the oscillator and varying its tuning condenser until maximum current was flowing in the coupled circuit, upon determining the fre-

quency an idea could readily be had of how closely the auxiliary circuit was tuned to the frequency it was desired to study. With this information it was easy to add or to subtract wire from the auxiliary circuit as required, fine adjustment being finally made at the condenser terminals by loosening the set screws which held the wire in place in holes in the arms supporting the condenser and adjusting the length of the inductance by pushing the wires in or pulling them out of the holes The graphs (Figs 4 and 5) of the resonance peak of the tuned auxiliary circuit measured at 10,400,000 cycles, and at 28,400,000 cycles, give a good idea of the type of resonance obtained in this circuit

It will be noted that the circuit tunes more sharply at the lower frequency. In this case the peak of the resonance curve is about 180,000 cycles broad, while, at the higher frequency, the breadth of the peak is about 1,200,000 cycles.

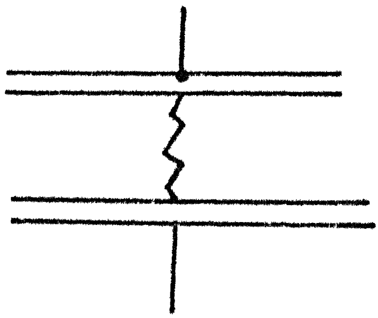
We may, therefore, conclude, since the tuning of the auxiliary circuit is rather broad, that this circuit presents considerable resistance. Hence, only approximate accuracy is necessary in setting the auxiliary circuit to resonance as the current flowing through it, when tuned to somewhere near the oscillator frequency, is ample for experimental purposes.

Effects of Exposure on Laboratory Animals

It will be noted in the auxiliary circuit just described that the experimental animal, insulated in a box of nonconducting material, is placed in the field between the plates of the condenser while the coupled circuit is excited by the oscillator at some particular frequency. Consequently, no free electrons from the external metallic parts of the circuit can enter, nor can they flow out from the body of the experimental animal. The mouse, however, is subjected to a displacement current, in which electrons in the molecules of the body cells will, according to their state of freedom, either pass from molecule to molecule, first in one and then the other direction or, if bound, are stressed in a direction the polarity of which alternates at the oscillator frequency.

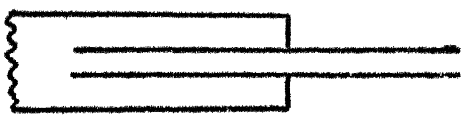
The equivalent electric circuit presents at least two possibilities. The first and more probable possibility is that the system may be regarded as two condensers in series connected by a resistance, the first condenser being formed by one plate of the condenser and the body surface of the mouse, in close proximity to it, the intervening celluloid acting as a dielectric. The second condenser is formed, in

similar fashion, by the lower surface of the body, the intervening tissues acting as the connecting resistance thus:



That this equivalent circuit is probable is shown by the fact that we can readily substitute in place of the mouse two metallic plates connected with each other and spaced far enough apart to fit snugly against the top and bottom of the box. It was determined experimentally that two rectangular copper plates each 2.5 by 2 centimeters and spaced 2 centimeters by a connecting copper strip furnished an electrical equivalent for a mouse. If the coupled circuit were tuned to the oscillator frequency with this arrangement in the box, it was found to be approximately in tune if a mouse were substituted. However, the coupled circuit with the substitute in place had naturally a much lower resistance than with a mouse, so that the current registered for a given filament temperature was considerably higher.

Another possibility is that the mouse's body acts in the circuit as a dielectric of poor quality. In this case the electric equivalent would be a condenser shunted by a resistance as shown below.



It has already been mentioned that the insertion of the mouse holder containing a 20 gram mouse between the condenser plates increased the capacity about four times. The effect of the presence of the mouse holder and mouse on the tuning of the circuit is well shown in the following way. When the auxiliary circuit, with the mouse in place, is tuned to the oscillator's frequency, if the mouse holder and mouse are then removed the needle of the microammeter, indicating the current in the tuned circuit, drops to zero. If the oscillator be tuned to resonance with the circuit in this condition, the frequency will be found at a point considerably higher.

In this case, as might be expected, with a perfect dielectric, as air, filling the space between the condenser plates, the resistance of the

circuit is lower, so that the resonance peak is sharper and the current flowing greater for a given oscillator output.

While it may well be that the electrical behavior of the mouse in the circuit partakes of both modes of action just described, still, on the whole, the first state of affairs described seems the more likely.

Effects upon laboratory animals.—Exposure of small laboratory animals, such as white mice, in the manner described, to the rapidly oscillating field between the condenser plates of the auxiliary tuned circuit, causes death usually in a few minutes if the current value be sufficiently great.

The symptoms observed are, in general, as follows: For a short, variable time the mouse is quiescent. This is followed by agitation increasing with the length of exposure. The ears, tail, and paws turn a bright pink which, in many instances, becomes livid or cyanotic as the exposure is prolonged. There is salivation, the nasal secretion is increased; the head and under parts of the body become wet and bedraggled; the paws are covered with beads of moisture. After a variable time convulsions accompanied by convulsive winking take place, dyspnea sets in, and finally respiration ceases. In males there is usually considerable swelling of the genitalia. The heart, however, continues to beat for a little while after respiration ceases.

In the great majority of instances the body of the mouse appears distinctly warm to the hand, and if the rectal temperature be taken immediately after death considerable elevation in the body temperature is found to have taken place, the temperature varying from 42.2° to 43.1° and even 44° C. However, this is not always the case, as death was repeatedly observed to occur in the usual time, and yet the elevation of the body temperature was only moderate, in one instance the rectal temperature not exceeding 39.2° C., a temperature which is not infrequently observed in apparently normal mice. However, in the majority of instances the exposure has caused considerable elevation of the body temperature and we may infer that the primary fatal effect observed consists in raising the body temperature to a degree incompatible with life.

Since the rectal temperature of a normal mouse, according to the temperature of the environment, may be anything from less than 37° to about 39° C., the exposure has brought an increase of the body temperature of anywhere from 5° to 6° C.

In the case of mice, however, which had been killed by exposure to carbon monoxide gas, and then immediately exposed in the coupled circuit, the heating effect was far less pronounced. In dead mice it was found, using the same current and time of exposure necessary to kill living mice at that particular frequency, that the

rise in the body temperature of the dead mouse was of a much lower order, amounting to but 0 7° to 1° C. In many instances there was no gain, and in others a loss was recorded.

This would suggest that the heating effect is different from the diathermic effect observed at the lower frequencies used for therapeutic purposes, as by the use of high-frequency current in diathermic apparatus it is easy to raise the temperature of dead tissues well above the point at which albumen coagulates.

However, at certain frequencies considerable heating effect was observed even in dead mice Thus, at 6 6 meters, or a frequency of 45,000,000 cycles, 3 dead mice, as the result of exposure lasting 8.5 minutes, showed gains in the rectal temperature of 2.33° 3.6° and 4.4° C., respectively.

Sequelæ of exposure to sublethal doses.—Apart from the acute symptoms previously mentioned exposure to these high-frequency currents may cause destruction of tissue. After sublethal exposures, in many instances, small hemorrhagic areas may be observed along the course of blood vessels of the ears. In the course of 48 hours the ears become necrotic and drop off. The tail also often presents numerous ecchymotic areas. It may subsequently become affected with dry gangrene and drop off. In other instances areas of alopecia develop, particularly in the supra-orbital region or at the tip of the snout. In one instance a panophthalmitis developed with subsequent loss of vision.

Effects of change in frequency.—In preliminary observations it soon became evident that the effects of exposure to different frequencies was not the same, a current of constant value proving more lethal at some frequencies than at others Furthermore, the change in lethal effect did not appear to bear any simple relation to change in frequency, as one would be led to expect, so it was determined to study the changes, if any, in the lethality of a constant current as the frequency changed. Since part, at least, of the effect of the exposure was due to increase in the body temperature which, in turn, might be modified by changing external temperature conditions, it was evident that, to avoid serious error, the observations must all be made under substantially constant meteorological conditions.

The standard conditions of temperature and humidity at which to conduct the experiments were arbitrarily fixed at 24° C. and 40 to 42 per cent relative humidity, as these represented a fair average of the atmospheric conditions at which preliminary observations were made.

To secure these conditions, the apparatus depicted in Figure 6 was set up. As will be seen from the diagram, it consisted of the following parts:

The condenser, in the field of which the mouse was exposed, was mounted in a wooden box 22 by 10 by 9.5 centimeters outside dimen-

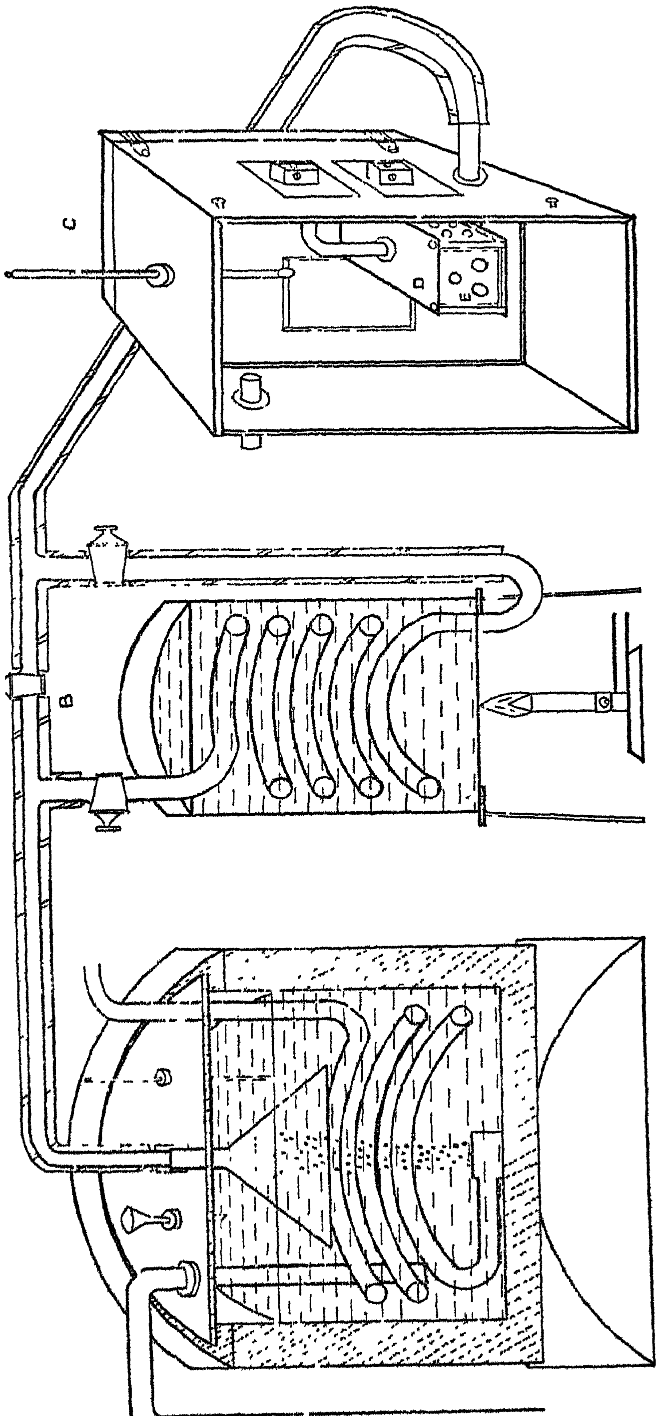


Fig 6.—Constant temperature and humidity apparatus A, Humidifier, B, Hot-water bath, C, Box containing condenser, D, Condenser, E, Mouse holder

sions. The front and back sides of the box, provided with celluloid windows for observation, were removable and were held in place by stout rubber bands To secure a close fit, the inner side of each was fitted with a rubber gasket 1 centimeter wide which bore against the edges of the box.

Air taken from the laboratory compressed-air supply was first cooled and partly saturated by bubbling through water in a large wash bottle, which itself was cooled to approximately 10° C. by immersion in water of that temperature. The air issuing from the wash bottle was piped to a copper coil inside a large container packed in sawdust and filled with water which was kept at a constant temperature of 10° C. From the copper coil the air issued in a stream of fine bubbles, from a bubbler consisting of a small, weighted tin can, the open end of which was covered with 8 or 10 thicknesses of butter cloth The air, cooled to 10° C., and thus practically fully saturated with moisture at that temperature, was piped through a jacketed copper pipe to the box in which the condenser was mounted, entering at the bottom through a glass tube in a perforated rubber stopper tightly fitted in a hole in the side of the box

The ventilating current, rising through the box, issued through a similar glass tube at the top of the opposite side. A ventilation of about 8 to 9 liters per minute was maintained through the box. A centigrade thermometer inserted through a perforated rubber stopper in the top of the box indicated the interior temperature.

Since the amount of moisture which fully saturates air at 10° C. will leave it only 42.1 per cent saturated at 24° C., it is obvious that, to secure the standard atmospheric conditions determined upon, all that is necessary is to see that the temperature of the box is maintained at 24° C., or as close to that figure as is practicable.

In order to provide means of heating the air when necessary, a coil of copper pipe in a hot-water bath was provided in the vicinity of the box, through which air could be by-passed, before reaching the box, by means of two stopcocks, as shown in the figure. In this manner, whenever, owing to external conditions, the temperature of the box tended to fall below 24° C., the incoming air could be led first through the copper coil in the hot-water bath and thus heated to the necessary extent. Since, when heated, no moisture would be lost, nor could it gain any, upon cooling to the temperature of the box, the relative humidity would comply with the conditions.

With the apparatus just described a large number of observations were made at a constant current and at frequencies varying from 135,000,000 to 8,330,000 cycles per second. The constant current employed caused a deflection of 30 divisions on the scale of the microammeter, corresponding to a current of 338 milliamperes flowing in the auxiliary tuned circuit.

This value of current was chosen because preliminary observations had shown that, at lethal frequencies, this current value always caused death in 10 minutes or less. In the great majority of instances ten mice weighing between 19 and 22 grams were used successively at each frequency and sometimes more were used.

The difference in frequency employed was in the neighborhood of 10 per cent. This accounts for the fact that many of the frequencies and wave lengths given in Table 1 are not integers. In that table are set forth the frequencies at which observations were made, the number of observations, the average time elapsing before death, the maximum time, the minimum time, and the usual time.

TABLE 1

Frequency times 10^6	Wave length	Number of observations	Average length of survival	Minimum length of survival	Maximum length of survival	Usual length of survival
	Meters		*Minutes*	*Minutes*	*Minutes*	*Minutes*
135	2.22	8	26.4	16.5	[1]	21-25
121.5	2.47	10	20.1	13.5	26.5	20-22.5
110	2.73	10	15.9	11.5	20.0	17
99	3.03	11	15.6	9.25	23.0	14.5-16
90	3.34	12	10.9	8.0	17.5	9-12.5
81	3.7	9	9.9	7.0	16.5	8-10.5
73	4.11	10	9.5	6.5	15.5	9-9.5
66	4.54	10	7.7	6.0	9.0	7-8
60	5.0	9	8.0	5.5	9.5	7-9
55	5.44	10	9.25	5.0	12.0	9-10
50	6.0	6	9.37	7.0	11.0	8.5-10
45	6.66	14	7.8	4.5	10.5	7-8.5
42.8	7.0	5	8.1	6.0	11.5	7-8
40.1	7.25	10	7.6	6.0	9.5	7
35	8.51	16	9.1	6.5	14.5	7.5-9.5
30	10.0	10	8.5	7.0	10.5	7.5-8.5
27	11.11	10	6.65	5.0	8.0	6-7
24.3	12.3	10	10.52	8.5	11.0	9.5-10.25
22.22	13.5	13	7.8	5.0	12.0	6.5-7.5
20	15.0	12	8.27	6.0	11.5	7-8.5
18	16.6	15	6.93	4.5	9.5	5.5-6.5
16.2	18.5	11	7.1	5.5	11.5	6-7.5
14.6	20.75	9	11.3	7.75	15.0	10.5-12
13.7	21.9	10	10.6	7.5	16.5	10-12
12.33	24.1	10	14.25	9.0	19.5	12-14.5
11.1	27.0	11	14.5	8.0	19.5	12-13.5
9.93	30.2	10	9.65	6.5	14.0	8-9
9.2	32.5	9	11.5	7.5	17.0	10-11.5
9.0	33.3	10	23.5	15.5	[2] 35.0	22-30
8.5	35.3	11	17.2	11.0	[3] 30.0	16-18
8.33	36.0	11	17.7	11.5	32.0	16-19

[1] 1 mouse survived 43 minutes unaffected.
[2] 3 mice survived 35 minutes unaffected.
[3] 1 mouse survived 30 minutes unaffected.

The average time of survival plotted against frequency is graphically shown in the chart which accompanies the table.

It will be seen from the graph that, starting at a frequency of 135,000,000 cycles per second, with a constant current maintained in the auxiliary circuit of 338 milliamperes, the lethality increases until at 66,000,000 cycles the mean time of survival has been reduced from an average of 26.8 minutes to one of 7.7 minutes, a reduction of 71.3 per cent. From this point, with a fluctuation of a minute or so in the mean time of survival, the lethality of the various frequencies

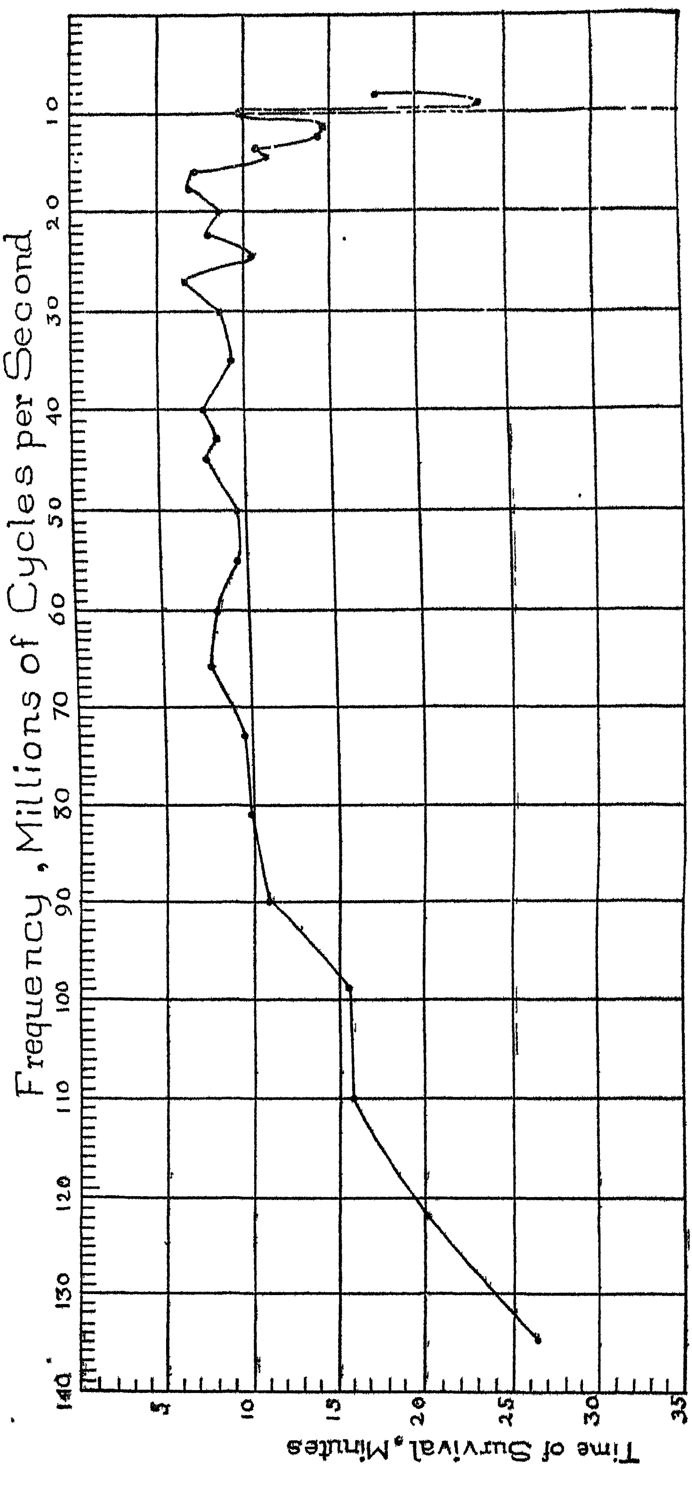


Chart showing the average time of survival of mice subjected to currents of various frequencies

observed maintains itself at more or less the same value over a frequency band of considerable width, i. e. from 66,000,000 to 27,000,000 cycles, at which point the low average period of survival of 6.65 minutes is recorded, or about 75 per cent less than the average time of survival at 135,000,000 cycles. At 21 3 million cycles the current becomes less lethal by about 40 per cent but at 18,000,000 cycles the current has about the same degree of lethality as at 27,000,000 cycles.

From 18,000,000 cycles the lethality on the whole diminishes, till at 11.1 million cycles the average time of survival increases to 14.5 minutes, 105 per cent longer than at 18,000,000 cycles. At a frequency of 10,000,000 cycles a recrudescence in lethality is observed, the mean time of survival falling to 9 65 minutes. At a frequency of 9,000,000 cycles, however, the lethality is comparatively low, the average time of survival being 23.5 minutes, nearly the same as it was at 135,000,000 cycles. At this frequency three mice survived exposures lasting 30 to 35 minutes apparently unharmed except for slight elevations of the body temperature. At 8 33 million cycles, beyond which point the observations were not carried, the lethality of the exposure seems on the increase, as well as at 8.5 million cycles, as the average time of survival of 11 mice was 17.2 and 17.7 minutes, respectively.

Discussion

From the configuration of the curve it is evident that the results just described are unexpected. Starting with a low lethal effect at the highest frequencies studied, a gradual increase in lethality is observed, followed by maintenance of fatality of the same order with successive small maxima and minima until at 18,000,000 cycles a peak is reached, followed by an abrupt decline, separated from the low point at 9,000,000 cycles by another maximum.

This result differs from what is usually observed in physical phenomena of this character. On the whole one would expect to find either that the lethality of a constant current was independent of frequency, or if dependent would show some simple relation thereto, e. g., be either inversely or directly proportional. That the lethality should be at first inversely and subsequently directly proportional to frequency is puzzling, and certainly not susceptible of any simple explanation.

At first one is tempted to assume that the results of the observation are apparent only. For instance, it might be urged that the apparent low lethality of the higher frequencies might be due to the "skin" effect of these frequencies upon the thermocouple.

As is well known, the high frequency resistance of conductors increases with the frequency, because, as this becomes greater, the current is confined to a surface pellicle of ever-diminishing thickness.

This so-called "skin effect" would occasion an increase with frequency in the apparent resistance of the thermocouple. Hence there would be a greater heating effect at the very high frequencies, and, as a result, a higher e. m. f. between the hot and cold junctions of the thermocouple, which would be reflected by a higher reading on the microammeter scale than would be justified by the actual oscillatory current flowing in the circuit.

That there may be some such effect at the highest frequencies is not denied, but how explain on these grounds the pronounced recession in lethality at the lower frequencies, where the "skin effect" is admittedly much less. Thus, we note that the lethality at 18.1 million cycles is about the same as at 24.3 million cycles, but very much greater (nearly 240 per cent) than at 9,000,000 cycles. Yet the skin effect, if important, should be more noticeable at 18,000,000 than at 9,000,000 cycles.

In view of the circumstance that, generally speaking, exposure to the oscillating current has very much less heating effect on dead than on living tissues, it may be suggested that, here, we are dealing with some action other than the direct heating effect observed at ordinary frequencies with diathermic apparatus.

In this case the heating effect is proportional to the product of the resistance and the square of the current Under the conditions of this study it is possible that the heat generated is caused by dielectric loss or hysteresis.

Again there is the possibility that the action is indirect rather than direct, the high-frequency current increasing the basal rate of metabolism, or perhaps causing heat retention through its influence upon thermogenic centers.

That the effects of exposure to the high-frequency current is capable of directly damaging tissue is shown by the sequelae already described, which are observed in mice subjected to a sublethal exposure.

As for the differential action of the different frequencies, which is the most striking of the effects observed, nothing except of a speculative nature can be advanced by way of explanation. For instance, it might be thought possible that at certain frequencies harmonics generated by the oscillator are in resonance with the natural period of organic molecules, particularly of animal proteids. These are well known to possess a very high molecular weight except for certain colloidal aggregates, perhaps the highest known molecular weights. Consequently, the natural period of resonance would be correspondingly low.

Nevertheless, in spite of the great size of the body molecules, the natural period of these, though relatively low compared with the molecules of simpler structure, would be sufficiently high to correspond to a wave length of from 0.5 to 3 or 4 millimeters, and hence to a fre-

quency of six times 10^{10} to seven times 10^9. The generation of definite harmonics of such a high order on the part of the oscillator seems altogether unlikely.

I am, however, indebted to Prof. George W. Pierce for the suggestion that the differential effects due to frequency may be caused by a mode of electromechanical vibration of the tissue cells, and for the accompanying reference to literature on the subject. Mechanical oscillations in solid elastic spheres have been given thorough mathematical treatment by Lamb.[4] A number of modes of vibration are analyzed and certain constants corresponding therewith are given. Some of the values of these constants (here designated "K") as given by Lamb, are $K=0.66$, 1 89, 2.93, 3.94, 4.96, 5.97, etc., the lowest value corresponding to the mode of vibration having the longest period. Since a solid elastic sphere is capable of vibrating in a number of different successive modes, each of which has a frequency greater than that preceding it, such a sphere is capable of responding to impressed oscillations of different frequencies.

The frequency, F, at which the sphere vibrates in a particular mode is given in simplest form by the equation—

$$F=K\frac{V}{D} \tag{1}$$

where F = Frequency of the particular mode of vibration.

K = The corresponding constant given by Lamb.

V = Velocity of the propagation of sound in the material composing the sphere.

D = Diameter of the sphere.

From this equation it follows directly that the diameter of a sphere vibrating in a particular mode at frequency, F, is given by the equation—

$$D=K\frac{V}{F} \tag{2}$$

In this case let us assume that the velocity of the propagation of sound through tissue cells is approximately that of its propagation through water, i. e., 1.45×10^5 centimeters per second. For the value of K let us take 0.66, which corresponds to the mode of vibration having the longest period and thus to the diameter of the smallest sphere capable of vibrating in some mode at that particular frequency. For F let us assume a value $F=40\times10^6$, a frequency somewhere in the middle of the band of lethal frequencies observed. Substituting these values in equation (2) we obtain for D, diameter of the sphere, 0.0024 centimeters or 24 microns. This diameter, while great for body cells, is, nevertheless, encountered in a number

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[4] Lamb, H.: On the Vibrations of an Elastic Sphere. Proceedings of the London Mathematical Society Series, I, 1882, vol. 13, p. 189.

of cells in the nervous system. The diameter of the smallest sphere capable of oscillating at the highest frequencies worked with would be in the neighborhood of 7 microns, while at the lowest lethal frequency (lowest frequency of high lethality 10×10^6), this diameter would be 96 microns. This is greater than the diameter of any body cells except, perhaps, some of the giant pyramidal cells of the nervous system. However, in this instance one might venture the speculation that second or third order harmonics of the oscillator might, at the lower frequencies, possess sufficient energy to induce some form of electromechanical resonance in the body cells, although the fundamental frequency is too low to resonate with any except the sufficiently large body cells just mentioned.

As to the way in which electrical oscillations could induce mechanical vibrations in body cells, speculations are again in order. One possibility, at least, is that cell membranes act as dielectrics at the boundaries of cells. This would cause the contiguous surfaces of cells to act as condensers resulting in stresses of alternating polarity at the impressed frequency. A reinforcement of the effect resulting in mechanical vibrations would reasonably be expected when the frequency of the applied stresses approaches the natural period for mechanical vibrations of the cell. It would not, however, be expected that this frequency is critical, as such a system must, of necessity, be highly damped. So, if responsive, the response would merely be greater for a range of frequencies in the neighborhood of the frequency of mechanical vibrations.

Conclusions

On the basis of the data gathered in the foregoing experiments, the following conclusions are permitted:

1. When small laboratory animals are placed in a box of insulating material and subjected to the action of a high frequency oscillating current in the field of a condenser resonating a tuned circuit, severe symptoms are caused which may result in death if the exposure is prolonged. Part at least, of the symptoms is due to heat retention.

2. This effect is most marked in a certain band of frequencies extending from $F=66 \times 10^6$ cycles to $F=18.3 \times 10^6$ cycles, the effect diminishing in one direction from a band extending from $F=66 \times 10^6$ to $F=135 \times 10^6$ and in the other from $F=18.3 \times 10^6$ to $F=9 \times 10^6$.

3. There is, consequently, at constant current, under the conditions of the experiments, a differential action with respect to frequency, the lethality of a constant current being in one region of the spectrum inversely and in another portion directly proportional to frequency.

4. In the band of frequencies studied, successive maxima and minima with respect to lethality occur which are most pronounced as the lower frequencies are approached.

Finally it may be remarked that here we are dealing with a band in the spectrum of radiant energy which as yet has been little studied in its effects on living cells. Since frequency is the sole differentiating characteristic in the whole band of radiant energy it is perhaps to be expected to find that in electromagnetic waves, frequency is a determining factor in their mode of action upon living organisms. It is thought that this is a field which will well repay further study.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Report on the First Results of Laboratory Work on Malaria in England. S P. James Publication by the Health Section of the League of Nations, Geneva, 1926. (Abstract by L D. Fricks.)

While this is a report of observations made on artificially infected mosquitoes in the laboratory, it contains valuable suggestions to those who are engaged in malaria control. These observations were made in connection with the malarial treatment of general paralysis. Two thousand six hundred and thirty-eight *Anopheles maculipennis* were employed, 532 of which became infected and were used to bite 145 persons, 109 of whom developed malaria. Colonel James observes that it is no easy matter to infect mosquitoes with malaria even under the most favorable laboratory conditions. The conditions most favorable to the development of the *Plasmodia* in the mosquito causes high mortality among the mosquitoes themselves. To produce infective mosquitoes it is necessary that they be kept, after feeding on a malaria carrier, at a temperature of 24° C. in an atmosphere saturated with moisture, and the mosquitoes must be given frequent feedings—daily or every other day. It would seem that the required conditions for producing naturally infected mosquitoes are only rarely met. In addition, very few malaria patients are good infectors of *Anopheles* The extreme delicacy of these requirements indicate to the author that malaria should be dealt with in the houses of the people rather than in the environment, and that a waste of effort is involved in measures directed toward general mosquito destruction.

(Abstractor's note: LePrince pointed out the importance of destroying engorged *Anopheles* in houses as a malaria-control measure in the Panama Canal Zone many years ago)

Problems in Malaria Control. W E. Deeks. Fourteenth Annual Report United Fruit Company, 1925, pp. 170–186. (Abstract by L. D. Fricks.)

Doctor Deeks states that malaria is responsible for 40 per cent of the sickness on the plantations of the United Fruit Company, and it is therefore the most important single factor in lowering the efficiency of labor. A description is given of certain United Fruit Company plantations and the extent of the malaria problem thereon indicated. Among the conditions which influence the incidence of

malaria on these plantations are listed the following: Rainfall; location of camps; screening of quarters; and impaired physical condition frequently due to complicating diseases. Measures of malaria control recommended are: Mosquito control for a radius of two miles around the settlements, careful selection of new camp sites; stabilizing of population, and screening of houses and cure of carriers.

AMERICAN PUBLIC HEALTH ASSOCIATION TO MEET IN BUFFALO, OCTOBER 11-14, 1926

What is new in public health? How are communities, urban and rural, coping with the public health problems that confront administrators, public health officers, nurses, and inspectors? These questions will be answered, and problems that have been the subject of laboratory research will be discussed by specialists at the fifty-fifth annual meeting of the American Public Health Association to be held in Buffalo, N. Y., October 11-14, 1926. This association is the professional society of the public health workers of North America.

It is expected that this year's meeting will be the largest and the most interesting of all the annual gatherings of the association, and this expectation is fully justified on the basis of the announcements contained in the preliminary program recently issued. The sessions are arranged in four sections—general sessions; special sessions, which have been developed around subjects of timely and lively interest; sessions of the nine scientific sections of the association; and the special program arranged by the New York State Conference of Health Officers and Public Health Nurses, which the State health commissioner, Dr. Matthias Nicoll, has called to meet in conjunction with the American Public Health Association.

The meeting will begin on Monday morning, October 11, and will end with a special dinner session on Thursday evening, October 14. The headquarters of the association will be in the Hotel Statler, where all sessions will be held. The preliminary program and other information regarding the meeting may be had by addressing Homer N. Calver, Executive Secretary, American Public Health Association, 370 Seventh Avenue, New York City.

AMERICAN DIETETIC ASSOCIATION MEETING AT ATLANTIC CITY

The American Dietetic Association will hold its ninth annual meeting at Atlantic City, October 11, 12, and 13, 1926. The program will include papers and discussions on both scientific and administrative matters.

Dr. J. J. R. McLeod, of the University of Toronto, will address the convention on the advances made in physiology, and Dr. Julius Stieglitz, of the University of Chicago, will speak on the recent advances made in chemistry.

Arrangements have been made for some interesting exhibits, both commercial and noncommercial

Dr Ruth Wheeler, professor of physiology at Vassar, is the president of the association.

DEATHS DURING WEEK ENDED AUGUST 28, 1926

Summary of information received by telegraph from industrial insurance companies for week ended August 28, 1926, and corresponding week of 1925 (From the Weekly Health Index, September 1, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Aug 28, 1926	Corresponding week, 1925
Policies in force	64, 869, 549	60, 879, 605
Number of death claims	10, 175	10, 590
Death claims per 1,000 policies in force, annual rate	8 2	9. 1

Deaths from all causes in certain large cities of the United States during the week ended August 28, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, September 1, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Aug 28, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Aug 28, 1926[2]
	Total deaths	Death rate[1]		Week ended Aug 28, 1926	Corresponding week, 1925	
Total (65 cities)	5, 625	10 2	10 5	760	901	[3] 61
Akron	27		13 3	8	11	85
Albany[4]	19	8 3		1	0	21
Atlanta	63			13	7	
White	26			4		
Colored	37	(5)		9		
Baltimore[4]	167	10 8	10 7	25	22	73
White	125			17		61
Colored	42	(5)		8		130
Birmingham	56	13 8	14. 7	13	6	
White	34			7		
Colored	22	(5)		6		
Boston	186	12. 3	11 5	45	23	127
Bridgeport	28			3	2	51
Buffalo	119	11 4	10 7	8	24	33
Cambridge	18	7. 7	7 8	3	3	50
Camden	23	9 2	8. 1	7	4	118
Canton	21	10 0	3. 9	4	0	89
Chicago[4]	533	9 1	9 3	61	81	54
Cincinnati	129	16. 4	14 0	15	14	93
Cleveland	166	9 0	9. 6	21	36	54
Columbus	64	11 7	11 9	10	12	92
Dallas	39	10 2	10. 5	8	7	
White	28			8		
Colored	11	(5)		0		
Dayton	38	11 2	9 6	0	2	0
Denver	62	11 3	16 0	8	16	
Des Moines	16	5 7	8 5	2	3	33
Detroit	212	8 6	10 4	39	66	63
Duluth	21	9 7	9 0	2	3	47
El Paso	23	11 0	11 9	3	5	
Erie	21			2	1	38
Fall River[4]	24	9 6	9 7	2	5	29
Flint	17	6 5	7. 2	5	5	83
Fort Worth	25	8 2	6 2	5	1	
White	22			5		
Colored	3	(5)		0		
Grand Rapids	19	6 4	11 2	0	10	0
Houston	37			4	4	
White	28			2		
Colored	9	(5)		2		
Indianapolis	92	13 1	12. 1	12	10	88
White	73			8		68
Colored	19	(5)		4		229

See footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended August 28, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Aug 28, 1926: Total deaths	Week ended Aug 28, 1926: Death rate [1]	Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year: Week ended Aug 28, 1926	Deaths under 1 year: Corresponding week, 1925	Infant mortality rate, week ended Aug 28, 1926 [2]
Jersey City	40	6.6	10.4	4	8	28
Kansas City, Kans.	21	9.4	12.1	0	2	0
White	17			0		0
Colored	4	(5)		0		0
Kansas City, Mo.	85	11.8	11.4	13	11	
Los Angeles	203			15	22	42
Louisville	74	12.4	10.7	9	8	78
White	54			7		70
Colored	20	(5)		2		125
Lowell	18			2	6	37
Lynn	15	7.5	6.1	2	3	50
Memphis	61	18.0	16.7	9	9	
White	29			5		
Colored	32	(5)		4		
Milwaukee	74	7.5	8.8	16	7	74
Minneapolis	92	11.1	9.7	9	9	50
Nashville [4]	55	20.9	14.9	8	3	
New Bedford	31			5	5	87
New Haven	53	15.2	11.4	5	8	68
New Orleans	147	18.3	16.6	17	21	
White	76			5		
Colored	71	(5)		12		
New York	1,036	9.1	9.7	126	151	51
Bronx Borough	123	7.1	6.9	10	8	33
Brooklyn Borough	341	7.9	8.6	54	57	55
Manhattan Borough	425	11.8	12.9	45	73	50
Queens Borough	103	7.0	7.2	16	15	73
Richmond Borough	44	16.0	10.9	1	1	18
Newark, N. J.	101	11.5	10.7	25	15	120
Norfolk	32	9.6	8.0	2	3	37
White	8			0		0
Colored	24	(5)		2		99
Oakland	43	8.6	8.8	7	6	81
Oklahoma City	18			3	0	
Omaha	53	12.8	13.1	6	5	63
Paterson	18	6.6	12.1	3	2	52
Philadelphia	354	9.2	10.6	40	77	53
Pittsburgh	147	12.0	13.3	23	33	70
Portland, Oreg.	52			2	3	20
Providence	53	10.0	8.8	7	8	58
Richmond	43	11.9	11.5	12	7	151
White	24			4		78
Colored	19	(5)		8		280
Rochester	64	10.4	11.9	5	12	40
St. Louis	158	9.9	10.7	21	27	
St. Paul	41	8.6	12.3	1	3	9
Salt Lake City [4]	20	11.4	8.8	0	0	0
San Antonio	45	11.4	12.4	6	7	
San Diego	20	13.7	10.3	1	1	21
San Francisco	116	10.7	11.0	8	11	48
Schenectady	24	13.5	12.4	6	8	173
Seattle	61			4	5	37
Somerville	19	9.9	8.4	6	2	156
Spokane	17	8.1	10.5	4	1	94
Springfield, Mass.	28	10.1	9.2	3	2	43
Syracuse	43	12.2	10.3	3	7	38
Toledo	52	9.2	10.5	7	8	68
Trenton	31	12.1	15.0	4	8	67
Utica	25	12.7	10.3	2	3	44
Washington, D. C.	109	10.8	12.3	15	22	85
White	72			7		58
Colored	37	(5)		8		146
Waterbury	23			5	4	107
Wilmington, Del.	18	7.6	8.5	4	5	94
Worcester	37	10.0	12.6	9	7	104
Yonkers	15	6.7	11.5	2	5	45
Youngstown	39	12.3	7.8	11	5	140

[1] Annual rate per 1,000 population.

[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.

[3] Data for 63 cities.

[4] Deaths for week ended Friday, Aug. 27, 1926.

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population. Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Kansas City, Kans., 14, Louisville 17, Memphis 38, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended September 4, 1926

ALABAMA

	Cases
Cerebrospinal meningitis	1
Chicken pox	4
Diphtheria	18*
Influenza	8
Malaria	112
Measles	20
Mumps	7
Ophthalmia neonatorum	1
Pellagra	11
Pneumonia	25
Scarlet fever	12
Smallpox	7
Tuberculosis	56
Typhoid fever	103
Whooping cough	17

ARIZONA

Diphtheria	7
Malaria	1
Measles	2
Tuberculosis	16
Typhoid fever	1

ARKANSAS

Chicken pox	12
Diphtheria	3
Hookworm disease	2
Influenza	13
Malaria	198
Measles	3
Mumps	8
Paratyphoid fever	2
Pellagra	11
Poliomyelitis	1
Scarlet fever	1
Smallpox	5
Trachoma	2
Tuberculosis	15
Typhoid fever	92
Whooping cough	19

CALIFORNIA

	Cases
Cerebrospinal meningitis	
Long Beach	1
San Diego County	1
Chicken pox	29
Diphtheria	87
Influenza	6
Measles	141
Mumps	60
Poliomyelitis	
Long Beach	1
Paso Robles	1
Redwood City	1
San Diego	1
Rabies (human)—Los Angeles County	1
Scarlet fever	63
Smallpox	7
Tuberculosis	163
Typhoid fever	20
Whooping cough	40

COLORADO

Chicken pox	10
Diphtheria	13
Influenza	4
Mumps	2
Pneumonia	1
Scarlet fever	4
Tuberculosis	54
Typhoid fever	15
Vincent's angina	2
Whooping cough	27

CONNECTICUT

Cerebrospinal meningitis	1
Chicken pox	2
Diphtheria	9
German measles	1
Influenza	1
Malaria	1

CONNECTICUT—continued

	Cases
Measles	9
Mumps	1
Paratyphoid fever	1
Pneumonia (broncho)	7
Pneumonia (lobar)	6
Poliomyelitis	1
Scarlet fever	13
Septic sore throat	18
Tuberculosis (all forms)	35
Typhoid fever	8
Whooping cough	36

DELAWARE

Diphtheria	1
Malaria	1
Poliomyelitis	1
Scarlet fever	4
Tuberculosis	2
Typhoid fever	2

FLORIDA

Diphtheria	10
Influenza	2
Malaria	6
Measles	5
Mumps	6
Scarlet fever	4
Smallpox	10
Tetanus	1
Tuberculosis	8
Typhoid fever	7
Typhus fever	1
Whooping cough	8

GEORGIA

Dengue	1
Diphtheria	12
Dysentery	9
Hookworm disease	4
Influenza	15
Malaria	46
Measles	4
Mumps	2
Paratyphoid fever	5
Pellagra	1
Pneumonia	5
Poliomyelitis	1
Rabies	1
Scarlet fever	3
Septic sore throat	20
Smallpox	5
Tuberculosis	4
Typhoid fever	68
Whooping cough	22

IDAHO

Chicken pox	1
Measles	1
Mumps	1
Scarlet fever	5
Smallpox	2
Typhoid fever	1
Whooping cough	10

ILLINOIS

Cerebrospinal meningitis:	
Cook County	2
Moultrie County	1
Peoria County	1

ILLINOIS—continued

	Cases
Chicken pox	17
Diphtheria	69
Influenza	37
Lethargic encephalitis:	
Cook County	1
Henry County	1
Jackson County	1
Lawrence County	1
Lee County	1
Perry County	1
Schuyler County	1
Stephenson County	1
Measles	50
Mumps	23
Pneumonia	156
Poliomyelitis:	
Iroquois County	1
McLean County	1
Peoria County	1
Tazewell County	2
Scarlet fever	59
Smallpox	3
Tuberculosis	425
Typhoid fever	41
Whooping cough	185

INDIANA

Cerebrospinal meningitis	1
Chicken pox	1
Diphtheria	15
Influenza	9
Measles	13
Scarlet fever	15
Smallpox	3
Tuberculosis	50
Typhoid fever	21
Whooping cough	15

IOWA

Chicken pox	3
Diphtheria	12
Measles	1
Mumps	2
Pneumonia	1
Scarlet fever	8
Smallpox	2
Tuberculosis	4
Typhoid fever	0
Whooping cough	6

KANSAS

Cerebrospinal meningitis—Mayetta	1
Chicken pox	2
Diphtheria	10
Influenza	4
Malaria	7
Measles	5
Pneumonia	17
Poliomyelitis:	
Hutchinson	3
Jennings	1
Norcatur	1
Spearville	1
Stafford	1
Scarlet fever	29
Smallpox	2

KANSAS—continued

	Cases
Tetanus	1
Tuberculosis	50
Typhoid fever	22
Whooping cough	38

LOUISIANA

Diphtheria	14
Influenza	7
Lethargic encephalitis	1
Malaria	16
Pneumonia	20
Poliomyelitis	1
Scarlet fever	7
Smallpox	5
Tuberculosis	35
Typhoid fever	29

MAINE

Chicken pox	9
Diphtheria	1
Influenza	6
Measles	26
Pneumonia	2
Scarlet fever	20
Tuberculosis	5
Typhoid fever	14
Vincent's angina	2
Whooping cough	11

MARYLAND [1]

Cerebrospinal meningitis	3
Chicken pox	4
Diphtheria	18
Dysentery	16
Influenza	3
Lethargic encephalitis	5
Malaria	1
Measles	7
Mumps	3
Paratyphoid fever	3
Pneumonia (broncho)	7
Pneumonia (lobar)	11
Poliomyelitis	5
Scarlet fever	9
Tetanus	1
Trachoma	1
Tuberculosis	42
Typhoid fever	72
Whooping cough	72

MASSACHUSETTS

Cerebrospinal meningitis	1
Chicken pox	10
Conjunctivitis (suppurative)	6
Diphtheria	46
Dysentery	1
German measles	4
Lethargic encephalitis	1
Measles	17
Mumps	24
Ophthalmia neonatorum	34
Pellagra	1
Pneumonia (lobar)	16
Poliomyelitis	10
Scarlet fever	54
Septic sore throat	2

[1] Week ended Friday.

MASSACHUSETTS—continued

	Cases
Trachoma	1
Trichinosis	1
Tuberculosis (pulmonary)	104
Tuberculosis (other forms)	35
Typhoid fever	14
Whooping cough	81

MICHIGAN

Diphtheria	85
Measles	26
Pneumonia	68
Scarlet fever	72
Smallpox	1
Tuberculosis	249
Typhoid fever	18
Whooping cough	174

MINNESOTA

Chicken pox	7
Diphtheria	28
Influenza	1
Lethargic encephalitis	2
Measles	20
Poliomyelitis	3
Scarlet fever	59
Smallpox	3
Trachoma	1
Tuberculosis	33
Typhoid fever	7
Whooping cough	27

MISSISSIPPI

Diphtheria	22
Poliomyelitis	1
Scarlet fever	6
Smallpox	2
Typhoid fever	51

MISSOURI

(Exclusive of Kansas City)

Chicken pox	2
Diphtheria	15
Malaria	1
Measles	7
Mumps	11
Poliomyelitis	1
Scarlet fever	37
Smallpox	1
Trachoma	5
Tuberculosis	32
Typhoid fever	30
Whooping cough	27

MONTANA

Chicken pox	1
Diphtheria	2
Measles	5
Mumps	1
Rocky Mountain spotted fever	3
Scarlet fever	13
Smallpox	3
Tetanus	1
Tuberculosis	2
Typhoid fever	4

NEBRASKA

	Cases
Diphtheria	4
Measles	3
Poliomyelitis	1
Scarlet fever	2
Septic sore throat	2
Smallpox	2
Tuberculosis	1
Typhoid fever	4
Whooping cough	41

NEW JERSEY

Chicken pox	8
Diphtheria	33
Dysentery	1
Influenza	7
Measles	15
Paratyphoid fever	1
Pneumonia	18
Poliomyelitis	1
Scarlet fever	15
Typhoid fever	24
Whooping cough	134

NEW MEXICO

Chicken pox	2
Diphtheria	1
Measles	2
Mumps	4
Pneumonia	1
Rabies (in animals)	3
Tuberculosis	21
Typhoid fever	6
Whooping cough	6

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	1
Chicken pox	30
Diphtheria	34
German measles	8
Malaria	12
Measles	76
Mumps	18
Ophthalmia neonatorum	1
Paratyphoid fever	1
Pneumonia	35
Poliomyelitis	52
Scarlet fever	37
Tetanus	1
Typhoid fever	22
Vincent's angina	6
Whooping cough	194

NORTH CAROLINA

Chicken pox	4
Diphtheria	56
Dysentery (bacillary)	7
German measles	2
Malaria	28
Measles	24
Ophthalmia neonatorum	1
Poliomyelitis	12
Scarlet fever	35
Septic sore throat	4
Smallpox	12
Typhoid fever	[illegible]
Whooping cough	221

[2] Deaths.

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Diphtheria	10
Influenza	18
Malaria	120
Measles	6
Pellagra	12
Pneumonia	7
Poliomyelitis—Hughes County	1
Scarlet fever	4
Typhoid fever	94
Whooping cough	14

OREGON

Chicken pox	3
Diphtheria	10
Dysentery	1
Influenza	14
Measles	6
Mumps	3
Pneumonia	[2] 5
Poliomyelitis	1
Scarlet fever	8
Septic sore throat	1
Smallpox	9
Tuberculosis	10
Typhoid fever	6
Whooping cough	12

PENNSYLVANIA

Chicken pox	53
Diphtheria	117
German measles	12
Impetigo contagiosa	20
Measles	123
Mumps	8
Ophthalmia neonatorum—Philadelphia	8
Pneumonia	10
Poliomyelitis:	
Brothers Valley Township [3]	1
Chambersburg	1
Johnstown	1
Philadelphia	2
Scarlet fever	127
Tetanus:	
Franklin	1
North Whitehall Township [3]	1
St. Clair	1
Trachoma—Philadelphia	1
Tuberculosis	100
Typhoid fever	84
Whooping cough	389

RHODE ISLAND

Diphtheria	1
German measles	1
Influenza	4
Measles	1
Pneumonia	1
Poliomyelitis—Newport	1
Scarlet fever	3
Tuberculosis	10
Typhoid fever	1
Whooping cough	13

[3] County not specified.

SOUTH DAKOTA

	Cases
Diphtheria	1
Measles	2
Pneumonia	1
Scarlet fever	11
Smallpox	3
Tuberculosis	2
Typhoid fever	5
Whooping cough	4

TENNESSEE

	Cases
Chicken pox	4
Diphtheria	17
Dysentery	2
Influenza	4
Malaria	47
Measles	6
Pellagra	5
Pneumonia	3
Poliomyelitis	
Davidson County	1
Franklin County	1
Overton County	1
Scarlet fever	17
Smallpox	1
Tuberculosis	28
Typhoid fever	206
Whooping cough	18

TEXAS

	Cases
Chicken pox	5
Diphtheria	13
Influenza	18
Measles	3
Mumps	1
Paratyphoid fever	2
Pellagra	1
Pneumonia	2
Poliomyelitis	1
Scarlet fever	11
Smallpox	2
Tuberculosis	33
Typhoid fever	20
Whooping cough	30

UTAH

	Cases
Chicken pox	3
Diphtheria	13
Measles	3
Pneumonia	4
Poliomyelitis - Salt Lake City	1
Scarlet fever	2
Typhoid fever	1
Whooping cough	27

VERMONT

	Cases
Chicken pox	3
Diphtheria	3
Measles	3
Mumps	1
Whooping cough	19

WASHINGTON

	Cases
Cerebrospinal meningitis	1
Chicken pox	10
Diphtheria	8
German measles	4
Measles	6
Mumps	1
Pneumonia	1
Scarlet fever	14
Smallpox	6
Tuberculosis	17
Typhoid fever	25
Whooping cough	19

WEST VIRGINIA

	Cases
Chicken pox	1
Diphtheria	16
Influenza	20
Measles	22
Scarlet fever	20
Smallpox	3
Tuberculosis	8
Typhoid fever	24
Whooping cough	39

WISCONSIN

	Cases
Milwaukee	
Chicken pox	1
Diphtheria	5
German measles	1
Measles	8
Mumps	2
Pneumonia	2
Poliomyelitis	1
Scarlet fever	8
Tuberculosis	8
Typhoid fever	1
Whooping cough	66
Scattering	
Chicken pox	13
Diphtheria	13
German measles	4
Influenza	2
Measles	91
Mumps	6
Pneumonia	3
Poliomyelitis	1
Scarlet fever	38
Smallpox	6
Tuberculosis	37
Typhoid fever	11
Whooping cough	123

WYOMING

	Cases
Cerebrospinal meningitis—Natrona County	1
Chicken pox	1
Scarlet fever	2
Smallpox	1
Typhoid fever	1
Whooping cough	2

Reports for Week Ended August 28, 1926

CALIFORNIA

	Cases
Cerebrospinal meningitis—San Bernardino County	1
Chicken pox	33
Diphtheria	75
Influenza	6
Lethargic encephalitis:	
Los Angeles County	1
Santa Ana	1
Measles	141
Mumps	73
Poliomyelitis:	
Los Angeles	1
Los Angeles County	1
California [1]	1
Scarlet fever	65
Smallpox	4
Tuberculosis	171
Typhoid fever	23
Whooping cough	54

DISTRICT OF COLUMBIA

	Cases
Chicken pox	1
Diphtheria	7
Influenza	1
Pneumonia	2
Poliomyelitis	1
Scarlet fever	14
Tuberculosis	14

[1] Place not specified

DISTRICT OF COLUMBIA—continued

	Cases
Typhoid fever	3
Whooping cough	13

NORTH DAKOTA

	Cases
Chicken pox	2
Diphtheria	1
German measles	3
Pneumonia	3
Scarlet fever	8
Tuberculosis	3
Typhoid fever	2
Whooping cough	29

SOUTH CAROLINA

	Cases
Chicken pox	3
Dengue	32
Diphtheria	28
Hookworm disease	28
Influenza	78
Malaria	382
Paratyphoid fever	21
Pellagra	64
Poliomyelitis	2
Scarlet fever	9
Smallpox	8
Tuberculosis	48
Typhoid fever	118
Whooping cough	34

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week.

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
July, 1926										
Florida	3	66	301	33	55	7	8	14	48	84
Georgia	2	26	66	216	124	56	1	13	29	414
Iowa	2	37			72		0	76	59	10
Louisiana	0	25	160	126	1	37	2	24	5	188
Maryland		45	0	4	360	1	11	97	0	68
Virginia	5	64	280	175	638	21	22	68	41	188
Washington	12	128	8		183		8	118	85	36

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended August 21, 1926, 37 States reported 655 cases of diphtheria. For the week ended August 22, 1925, the same States reported 879 cases of this disease. Ninety-eight cities, situated in all parts of the country and having an aggregate population of more than 30,200,000, reported 397 cases of diphtheria for the week ended August 21, 1926. Last year for the corresponding week they reported 388 cases. The estimated expectancy for these cities was 541 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-five States reported 975 cases of measles for the week ended August 21, 1926, and 401 cases of this disease for the week ended August 22, 1925. Ninety-eight cities reported 238 cases of measles for the week this year, and 170 cases last year.

Poliomyelitis.—The health officers of 37 States reported 99 cases of poliomyelitis for the week ended August 21, 1926. The same States reported 296 cases for the week ended August 22, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-seven States—this year, 858 cases, last year, 705 cases; 98 cities—this year, 281 cases; last year, 285 cases; estimated expectancy, 238 cases.

Smallpox.—For the week ended August 21, 1926, 37 States reported 129 cases of smallpox. Last year for the corresponding week they reported 135 cases. Ninety-eight cities reported smallpox for the week as follows: 1926, 12 cases; 1925, 29 cases; estimated expectancy, 23 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—One thousand two hundred and fifty-one cases of typhoid fever were reported for the week ended August 21, 1926, by 36 States. For the corresponding week of 1925, the same States reported 1,319 cases of this disease. Ninety-eight cities reported 237 cases of typhoid fever for the week this year and 314 cases for the corresponding week last year. The estimated expectancy for these cities was 235 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 94 cities, with a population of nearly 29,700,000, as follows: 1926, 324 deaths; 1925, 309 deaths.

City reports for week ended August 21, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75, 333	0	1	0	0	0	1	1	4
New Hampshire									
Concord	22, 546	0	0	0	0	0	0	0	0
Manchester	83, 097	0	0	0	0	0	0	0	1
Vermont									
Barre	10, 008	0	0	0	0	0	0	0	0
Massachusetts									
Boston	779, 620	11	31	6	1	0	15	14	9
Fall River	128, 993	2	2	3	0	0	0	0	0
Springfield	142, 065	0	2	0	0	0	0	0	0
Worcester	190, 757	0	2	4	0	0	0	0	0
Rhode Island									
Pawtucket	69, 760	0	0	0	0	0	0	0	0
Providence	267, 918	0	3	2	0	0	0	0	1
Connecticut									
Bridgeport	(1)	0	4	3	0	0	0	0	0
Hartford	160, 197	1	3	1	0	0	2	0	4
New Haven	178, 927	0	2	1	0	0	4	0	0
MIDDLE ATLANTIC									
New York									
Buffalo	538, 016	0	11	10	--	0	1	2	5
New York	5, 873, 356	35	107	69	6	1	11	14	10
Rochester	316 786	2	4	2	-	0	1	2	2
Syracuse	182 003	0	3	1		0	10	0	0
New Jersey									
Camden	128, 642	0	2	7	0	0	2	0	1
Newark	452, 513	4	7	2	2	0	8	2	4
Trenton	132, 020	0	2	1	0	0	0	0	0
Pennsylvania									
Philadelphia	1, 979, 364	12	33	28	-----	0	7	0	18
Pittsburgh	631, 563	2	15	4	-----	2	11	0	10
Reading	112, 707	3	2	0	-----	0	1	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409, 333	0	6	2	0	1	3	1	6
Cleveland	936, 485	10	19	25	0	1	5	1	6
Columbus	279, 836	0	2	4	0	0	2	0	1
Toledo	287, 380	1	5	1	0	1	2	0	4
Indiana:									
Fort Wayne	97, 846	0	1	0	0	0	0	0	2
Indianapolis	358, 819	0	5	1	0	0	0	0	8
South Bend	80, 091	0	0	2	0	0	3	0	1
Terre Haute	71, 071	0	1	0	0	1	0	0	0
Illinois:									
Chicago	2, 995, 239	22	59	28	2	2	42	5	15
Peoria	81, 564	0	1	1	0	0	1	0	1
Springfield	63, 923	1	1	0	0	0	0	0	0
Michigan:									
Detroit	1, 245, 824	8	25	45	0	0	10	2	5
Flint	130, 316	0	4	1	0	0	0	0	1
Grand Rapids	153, 698	0	2	0	0	0	2	0	1

[1] No estimate made.

City reports for week ended August 21, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
EAST NORTH CENTRAL—continued									
Wisconsin									
Kenosha	50,891	0	1	0	0	0	17	0	1
Madison	46,385		1						
Milwaukee	509,192	4	10	4	0	0	17	5	3
Racine	67,707	2	1	0	0	0	4	0	1
Superior	39,671	0	0	4	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	0	2	0	0	0	3	0	3
Minneapolis	425,435	3	12	15	0	0	0	0	4
St. Paul	246,001	0	11	6	0	1	1	0	8
Iowa									
Davenport	52,469	0	1	0	0		0	0	
Sioux City	76,411	0	1	0	0		0	0	
Waterloo	36,771	0	0	0	0		2	0	
Missouri									
Kansas City	367,481	0	3	0	0	0	4	0	4
St. Joseph	78,342	0	0	0	0	0	1	0	2
St. Louis	821,543	3	18	20	0	0	0	0	
North Dakota:									
Fargo	26,403	0	1	0	0	0	0	0	0
Grand Forks	14,811	0	0	0	0		0	0	
South Dakota									
Aberdeen	15,036	0	0	0	0		0	0	
Sioux Falls	30,127		0						
Nebraska									
Lincoln	60,941	0	1	0	0	0	0	1	0
Omaha	211,768	0	5	0	0	0	1	0	1
Kansas									
Topeka	55,411	0	1	0	0	0	1	0	1
Wichita	88,367	0	1	0	0	0	1	0	0
SOUTH ATLANTIC									
Delaware:									
Wilmington	122,049	0	1	0	0	0	0	1	0
Maryland									
Baltimore	796,296	4	12	8	2	0	0	3	18
Cumberland	33,741	0	0	0	0	0	0	0	0
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia:									
Washington	497,906	0	3	7	0	0	3	0	8
Virginia:									
Lynchburg	30,395	0	1	1	0	0	0	0	1
Norfolk	(1)	0	1	0	0	0	0	0	2
Richmond	186,403	0	5	12	0	0	7	0	2
Roanoke	58,208	0	2	0	0	0	0	0	0
West Virginia									
Charleston	49,019	0	1	0	0	1	0	0	0
Huntington	63,485	0	0	0	0	0	0	0	1
Wheeling	56,208	0	0	0	0	0	1	0	1
North Carolina									
Raleigh	30,371	0	0	0	0	0	1	0	2
Wilmington	37,061	0	0	0	0	0	0	0	1
Winston-Salem	69,031	0	1	0	0	0	1	0	3
South Carolina.									
Charleston	73,125	0	1	1	0	0	0	0	0
Columbia	41,225	0	1	1	0	0	0	0	0
Greenville	27,311	0	1	0	0	0	0	0	0
Georgia									
Atlanta	(1)	1	2	1	2	0	0	0	3
Brunswick	16,809	0	0	0	2	0	0	0	2
Savannah	93,134	0	0	0	0	0	0	0	0
Florida:									
Miami	69,754	0		1	0	0	1	0	2
St. Petersburg	26,847		0			0			0
Tampa	94,743	0	1	1	0	0	0	0	3

[1] No estimate made.

City reports for week ended August 21, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	0	0	0	0	0	0	0
Louisville	305,935	0	3	0	0	0	1	0	3
Tennessee									
Memphis	174,533	0	3	0	0	0	0	0	0
Nashville	136,220	0	1	3	0	0	0	0	2
Alabama									
Birmingham	205,670	1	2	1	5	0	6	1	1
Mobile	65,955	0	0	0	0	0	0	0	1
Montgomery	46,481	0	1	0	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	31,643	--------	1	--------	--------	--------	--------	--------	--------
Little Rock	74,216	0	1	1	0	0	0	0	2
Louisiana:									
New Orleans	414,493	0	6	11	4	5	1	0	2
Shreveport	57,857	0	0	1	0	0	0	0	1
Oklahoma:									
Oklahoma City	(1)	0	1	0	0	0	0	0	3
Texas:									
Dallas	194,450	0	3	1	0	0	1	1	4
Galveston	48,375	0	1	0	0	0	0	0	0
Houston	164,954	0	1	0	0	0	0	0	1
San Antonio	198,069	0	1	1	0	1	0	0	5
MOUNTAIN									
Montana									
Billings	17,971	0	0	0	0	0	0	0	1
Great Falls	29,883	0	1	0	0	0	0	0	0
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	0	0	0	0	0	0	0	0
Idaho									
Boise	23,042	0	0	1	0	0	0	0	0
Colorado									
Denver	280,911	8	8	11	--------	0	1	1	4
Pueblo	43,787	0	3	1	0	0	0	0	0
New Mexico									
Albuquerque	21,000	0	0	0	0	0	0	1	0
Arizona									
Phoenix	38,669	0	0	1	0	0	0	0	1
Utah									
Salt Lake City	130,948	1	2	3	0	0	1	0	4
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	(1)	11	3	1	0	--------	4	4	--------
Spokane	108,897	1	2	2	0	--------	10	0	--------
Tacoma	104,455	0	1	2	0	1	0	0	1
Oregon:									
Portland	282,383	0	4	6	0	0	8	2	4
California:									
Los Angeles	(1)	11	24	12	3	0	1	2	12
Sacramento	72,260	1	2	0	0	0	1	1	0
San Francisco	557,530	6	13	0	1	1	13	0	9

1 No estimate made.

City reports for week ended August 21, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	0	0	0	0	0	2	1	1	0	4	22
New Hampshire											
Concord	0	0	0	0	0	0	0	0	0	0	6
Manchester	0	2	0	0	0	1	0	0	0	0	14
Vermont:											
Barre	1	0	0	0	0	0	0	0	0	0	1
Massachusetts											
Boston	13	18	0	0	0	10	3	3	0	21	177
Fall River	1	0	0	0	0	5	2	0	0	1	31
Springfield	1	2	0	0	0	1	1	0	0	2	23
Worcester	2	5	0	0	0	2	0	0	0	3	28
Rhode Island:											
Pawtucket	0	0	0	0	0	0	0	0	0	0	10
Providence	2	1	0	0	0	3	2	1	0	4	63
Connecticut:											
Bridgeport	2	1	0	0	0	0	0	0	1	1	27
Hartford	1	2	0	0	0	2	1	1	0	4	36
New Haven	1	2	0	0	0	1	3	1	0	2	22
MIDDLE ATLANTIC											
New York:											
Buffalo	4	5	0	0	0	10	3	1	1	1	115
New York	23	38	0	2	0	[1] 83	42	50	2	79	1,070
Rochester	3	2	0	0	0	1	1	2	0	9	57
Syracuse	2	0	0	0	0	0	1	1	0	9	42
New Jersey:											
Camden	0	1	1	0	0	2	1	0	0	7	27
Newark	4	1	0	0	0	9	2	2	0	24	85
Trenton	0	0	0	0	0	0	1	2	0	5	30
Pennsylvania:											
Philadelphia	16	11	0	0	0	28	13	10	3	42	405
Pittsburgh	8	0	0	0	0	3	4	0	0	33	122
Reading	0	0	0	0	0	0	1	0	0	22	13
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	3	3	0	0	0	12	3	1	0	5	141
Cleveland	7	15	0	0	0	19	5	5	1	73	164
Columbus	1	3	0	0	0	1	3	1	0	1	62
Toledo	5	1	1	1	0	5	3	2	1	39	73
Indiana:											
Fort Wayne	0	0	0	0	0	1	1	0	1	0	19
Indianapolis	2	1	1	2	0	1	3	1	1	21	103
South Bend	1	2	0	0	0	0	1	0	0	2	12
Terre Haute	1	0	1	0	0	0	0	0	0	0	16
Illinois:											
Chicago	23	18	0	1	0	49	6	7	0	71	536
Peoria	1	0	0	0	0	1	1	0	0	1	17
Springfield	0	1	0	0	0	1	1	2	0	8	13
Michigan:											
Detroit	20	17	2	0	0	15	5	8	2	80	201
Flint	3	2	0	0	0	2	1	0	0	2	17
Grand Rapids	1	1	0	0	0	2	1	0	0	5	34
Wisconsin:											
Kenosha	0	0	1	0	0	0	0	0	0	14	3
Madison	0	------	0	------	------	------	0	------	------	------	------
Milwaukee	7	3	1	0	0	5	1	0	0	53	76
Racine	1	0	0	0	0	2	0	0	0	0	10
Superior	1	2	0	0	0	0	0	0	0	0	5
WEST NORTH CENTRAL											
Minnesota:											
Duluth	3	10	1	0	0	0	0	1	0	2	23
Minneapolis	10	17	1	0	0	4	1	0	0	2	73
St. Paul	4	5	1	0	0	4	0	5	0	11	52

[1] Pulmonary tuberculosis only.

City reports for week ended August 21, 1920—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL—continued											
Iowa											
Davenport	0	3	0	0			0	0		1	
Sioux City	1	0	1	1			0	0		0	
Waterloo	1	0	0	0			0	0		1	
Missouri:											
Kansas City	2	0	0	0	0	4	3	0	0	3	93
St. Joseph	1	0	0	0	0	2	1	1	0	0	10
St. Louis	6	16	0	1	0	6	8	12	1	11	163
North Dakota											
Fargo	1	4	0	0	0	1	0	0	0	0	14
Grand Forks	1	0	0	0			0	0		0	
South Dakota											
Aberdeen	0	0	0	0			0	0		1	
Sioux Falls	1		0				0				
Nebraska:											
Lincoln	1	2	0	2	0	0	0	0	0	8	7
Omaha	1	2	1	0	0	1	1	1	1	3	47
Kansas											
Topeka	1	4	0	0	0	0	1	3	0	5	20
Wichita	1	1	0	0	0	2	2	1	0	3	21
SOUTH ATLANTIC											
Delaware:											
Wilmington	0	0	0	0	0	0	0	2	0	1	25
Maryland:											
Baltimore	5	5	0	0	0	29	9	11	2	72	212
Cumberland	1	0	0	0	0	0	1	0	0	0	10
Frederick	1	0	0	0	0	0	0	0	0	1	3
District of Col.:											
Washington	2	6	0	0	0	6	5	4	0	14	90
Virginia											
Lynchburg	1	1	0	0	0	0	1	2	0	4	16
Norfolk	0	1	0	1	0	2	2	4	0	3	
Richmond	2	5	0	0	0	1	2	6	1	1	31
Roanoke	0	0	0	0	0	1	2	1	0	0	20
West Virginia:											
Charleston	0	0	0	0	0	0	2	2	0	6	[illegible]
Huntington	0	0	0	0	0	1	2	0	0	0	25
Wheeling	1	0	0	0	0	0	1	0	1	1	16
North Carolina											
Raleigh	1	1	0	0	0	1	0	0	0	26	16
Wilmington	1	0	0	0	0	1	1	1	0	3	9
Winston-Salem	0	0	1	0	0	1	3	0	0	0	21
South Carolina											
Charleston	0	0	0	0	0	2	3	2	0	2	27
Columbia	1	1	0	0	0	0	1	1	0	0	
Greenville	0	0	1	0	0	0	1	0	0	0	8
Georgia											
Atlanta	3	0	1	1	0	4	4	13	3	1	78
Brunswick	0	0	0	0	0	1	1	0	0	0	6
Savannah	1	0	0	0	0	2	2	0	0	0	30
Florida:											
Miami		0		0	0	0		0	0	1	29
St. Petersburg	0		0		0	0	0		0		2
Tampa	0	1	0	1	0	3	0	1	2	0	34
EAST SOUTH CENTRAL											
Kentucky											
Covington	0	0	1	0	0	1	0	1	0	0	19
Louisville	1	2	1	0	0	10	5	5	0	0	91
Tennessee											
Memphis	1	0	0	0	0	3	7	16	2	8	49
Nashville	1	3	0	0	0	3	7	8	1	20	39
Alabama:											
Birmingham	3	2	0	0	0	5	7	2	0	17	57
Mobile	0	0	0	0	0	1	1	1	0	0	24
Montgomery	1	0	0	1	0	0	1	3	0	1	7

City reports for week ended August 21, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	---	0	------	------	------	0	----	------	------	------
Little Rock	0	0	0	0	0	3	2	0	0	0	------
Louisiana											
New Orleans	1	2	0	0	0	9	5	4	0	2	146
Shreveport	0	0	0	0	0	1	5	1	0	0	20
Oklahoma											
Oklahoma City	1	1	0	0	0	0	2	2	0	0	28
Texas											
Dallas	2	2	0	0	0	3	4	4	0	9	54
Galveston	0	0	0	0	0	0	0	0	0	0	14
Houston	0	0	0	0	0	2	0	0	0	0	46
San Antonio	0	0	0	0	0	8	1	1	0	0	60
MOUNTAIN											
Montana											
Billings	1	0	0	0	0	0	0	0	0	0	6
Great Falls	1	0	0	0	0	0	1	0	0	0	3
Helena	0	0	0	0	0	1	0	0	0	0	5
Missoula	0	0	0	0	0	0	1	1	0	0	4
Idaho											
Boise	0	1	0	0	0	0	0	0	0	0	3
Colorado											
Denver	2	3	2	0	0	4	3	1	0	3	65
Pueblo	0	0	0	0	0	2	1	5	0	0	9
New Mexico											
Albuquerque	0	1	0	0	0	4	1	0	0	4	21
Arizona											
Phoenix	------	1	0	0	0	4	0	0	0	0	12
Utah											
Salt Lake City	1	0	0	0	0	0	2	1	0	10	31
Nevada											
Reno	0	0	0	0	0	0	1	0	0	0	2
PACIFIC											
Washington:											
Seattle	3	1	1	1	------	------	2	2	------	11	------
Spokane	2	9	1	0	------	------	1	2	------	9	------
Tacoma	0	2	1	0	0	2	0	0	0	1	29
Oregon											
Portland	3	9	4	1	0	3	1	1	0	1	------
California											
Los Angeles	6	9	2	1	0	20	4	3	0	4	196
Sacramento	1	0	1	0	0	0	1	1	1	0	20
San Francisco	5	8	0	0	0	6	2	1	0	2	150

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis (infantile paralysis): Cases	Poliomyelitis (infantile paralysis): Deaths
NEW ENGLAND									
Massachusetts									
Boston	0	0	1	2	0	0	1	1	0
Fall River	0	0	0	0	0	0	1	1	0
Springfield	0	0	0	0	0	0	0	4	0
Worcester	0	0	1	1	0	0	0	10	1
Rhode Island:									
Providence	0	0	0	0	0	0	0	2	1
MIDDLE ATLANTIC									
New York									
Buffalo	0	0	1	0	0	0	1	13	3
New York	3	4	5	4	0	0	8	[illegible]	[illegible]
Syracuse	0	0	0	0	0	0	0	4	3

City reports for week ended August 21, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio:									
Cleveland	0	0	0	1	0	1	0	0	1
Illinois									
Chicago	1	0	2	0	0	0	5	1	0
Michigan:									
Flint	0	0	0	0	0	0	0	1	0
WEST NORTH CENTRAL									
Missouri									
Kansas City	0	0	0	0	1	1	0	0	0
St Louis	1	0	0	0	0	0	1	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	0	0	2	0	0	0	1	2	2
Virginia									
Roanoke	0	0	0	0	0	1	0	0	0
North Carolina:									
Raleigh	0	0	0	0	0	1	0	0	0
Winston-Salem	1	0	0	0	0	0	0	0	0
South Carolina:									
Charleston	0	0	1	0	1	0	0	0	0
Georgia:									
Brunswick	0	0	0	0	0	1	0	0	0
Florida:									
St Petersburg	0	1	0	0	0	0	0	0	0
EAST SOUTH CENTRAL									
Kentucky:									
Louisville	0	0	1	2	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Little Rock	0	0	0	0	0	2	0	0	0
Louisiana:									
New Orleans	0	0	0	0	2	2	0	0	0
Oklahoma:									
Oklahoma City	0	0	0	0	1	0	0	0	0
Texas:									
Galveston	0	0	0	0	0	2	0	0	0
MOUNTAIN									
Colorado:									
Denver	0	0	0	0	0	0	0	2	0
Utah									
Salt Lake City	0	1	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Spokane	1	0	0	0	0	0	0	1	0
California									
Los Angeles	0	0	1	0	0	0	0	1	0
Sacramento	1	1	0	0	0	0	1	0	0
San Francisco	0	0	0	0	0	1	0	0	0

The following table gives the rates per 100,000 population for 102 cities for the five-week period ended August 21, 1926, compared with those for a like period ended August 22, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925, and 1926, respectively, authoritative figures for many of the cities not being available. The 102 cities reporting cases had an

estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926 The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, July 18 to August 21, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926
102 cities	75	[2] 90	[3] 75	[2] 80	[4] 83	[5] 78	77	[5] 69	68	[6] 68
New England	60	33	60	40	79	40	89	31	50	47
Middle Atlantic	90	109	92	103	83	88	78	62	73	59
East North Central	63	99	69	83	94	[7] 105	68	[7] 101	51	[7] 87
West North Central	103	[2] 95	97	[2] 85	[8] 105	[2] 52	107	[2] 50	99	[9] 85
South Atlantic	42	34	[3] 48	21	52	43	69	49	60	60
East South Central	11	10	11	21	26	10	32	57	58	21
West South Central	66	39	40	39	22	39	48	26	57	[10] 66
Mountain	111	64	148	91	[11] 66	118	157	73	74	146
Pacific	99	175	64	119	141	102	80	105	110	62

MEASLES CASE RATES

	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926
102 cities	101	[2] 155	[3] 70	[2] 103	[4] 51	[5] 66	46	[5] 57	30	[6] 41
New England	208	109	180	83	127	83	125	69	93	52
Middle Atlantic	127	108	77	63	69	42	57	33	38	27
East North Central	111	248	68	171	44	[7] 96	35	[7] 77	21	[7] 60
West North Central	18	[2] 183	30	[2] 93	[8] 10	[2] 58	24	[2] 66	6	[9] 29
South Atlantic	90	128	[3] 68	115	42	47	40	81	33	36
East South Central	58	125	26	93	11	42	16	31	5	36
West South Central	4	13	0	9	0	9	9	4	9	[10] 9
Mountain	37	173	102	127	[11] 19	137	18	64	28	18
Pacific	19	213	33	121	28	121	19	94	11	78

SCARLET FEVER CASE RATES

	July 25, 1925	July 24, 1926	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926
102 cities	55	[2] 83	[3] 54	[2] 73	[4] 51	[5] 61	57	[5] 51	51	[6] 48
New England	60	85	72	118	98	104	81	69	89	73
Middle Atlantic	42	75	37	52	33	38	36	30	23	29
East North Central	63	93	60	55	48	[7] 79	54	[7] 56	54	[7] 47
West North Central	115	[2] 127	121	[2] 143	[8] 117	[2] 101	129	[2] 119	148	[9] 123
South Atlantic	15	30	[3] 34	31	21	39	38	30	40	39
East South Central	26	93	58	62	58	81	37	47	32	36
West South Central	31	82	26	80	53	17	66	22	48	[10] 18
Mountain	157	64	83	36	[11] 38	64	92	30	65	36
Pacific	44	92	47	86	61	84	83	86	41	78

[1] The figures given in this table are rates per 100,000 population, annual basis—and not the number of cases reported Populations used are estimated as of July 1, 1925 and 1926, respectively
[2] Sioux Falls, S. Dak , not included
[3] Tampa, Fla., not included.
[4] Waterloo, Iowa, and Helena, Mont., not included
[5] Madison, Wis., and Sioux Falls, S Dak , not included
[6] Madison, Wis , Sioux City, Iowa, Sioux Falls, S. Dak., and Fort Smith, Ark., not included.
[7] Madison, Wis., not included.
[8] Waterloo, Iowa, not included.
[9] Sioux City, Iowa, and Sioux Falls, S. Dak., not included.
[10] Fort Smith, Ark , not included.
[11] Helena, Mont , not included.

Summary of weekly reports from cities, July 18 to August 21, 1926. Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925—Continued

SMALLPOX CASE RATES

	Week ended—									
	July 25, 1925	July 24, 1926	Aug. 1, 1925	July 31, 1926	Aug. 8, 1925	Aug. 7, 1926	Aug. 15, 1925	Aug. 14, 1926	Aug. 22, 1925	Aug. 21, 1926
102 cities	10	[2] 6	[4] 9	[2] 5	[4] 9	[5] 8	7	[5] 7	6	[6] 2
New England	5	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	1	0	1	0	0	0	1
East North Central	8	8	3	6	6	[7] 9	3	[7] 1	2	[7] 2
West North Central	12	[2] 14	14	[2] 4	[8] 8	[9] 14	16	[9] 4	6	[9] 2
South Atlantic	15	6	[3] 2	2	2	11	2	11	4	6
East South Central	37	10	21	5	47	16	21	26	37	5
West South Central	4	13	4	4	13	13	9	22	4	[10] 0
Mountain	0	27	55	9	[11] 19	9	9	73	9	0
Pacific	64	8	80	32	64	24	64	32	41	5

TYPHOID FEVER CASE RATES

	July 25, 1925	July 24, 1926	Aug. 1, 1925	July 31, 1926	Aug. 8, 1925	Aug. 7, 1926	Aug. 15, 1925	Aug. 14, 1926	Aug. 22, 1925	Aug. 21, 1926
102 cities	33	[2] 18	[4] 40	[2] 30	[4] 40	[5] 29	46	[5] 35	55	[6] 41
New England	22	9	22	14	26	12	38	17	31	17
Middle Atlantic	21	9	30	28	23	19	33	24	44	34
East North Central	8	6	10	10	20	[7] 12	17	[7] 19	29	[7] 17
West North Central	[8] 38	[2] 12	46	[2] 22	[8] 41	[9] 18	55	[9] 24	46	[9] 50
South Atlantic	50	47	[3] 64	54	56	60	86	100	104	94
East South Central	163	135	168	259	252	182	200	140	168	187
West South Central	163	30	154	47	123	60	97	47	128	[10] 44
Mountain	46	46	55	36	[11] 104	27	109	73	102	73
Pacific	28	8	44	11	17	30	41	30	61	24

INFLUENZA DEATH RATES

	July 25, 1925	July 24, 1926	Aug. 1, 1925	July 31, 1926	Aug. 8, 1925	Aug. 7, 1926	Aug. 15, 1925	Aug. 14, 1926	Aug. 22, 1925	Aug. 21, 1926
90 cities	2	[2] 3	1	[2] 2	[11] 2	[5] 2	2	[5] 1	2	[5] 3
New England	0	2	0	0	5	0	0	0	0	0
Middle Atlantic	3	2	1	1	2	2	3	1	2	1
East North Central	1	4	0	1	3	[7] 1	3	[7] 0	1	[7] 3
West North Central	4	[2] 2	0	[2] 0	0	[9] 0	0	[9] 2	0	[9] 2
South Atlantic	4	4	[3] 2	2	6	4	0	0	0	2
East South Central	5	5	0	5	5	0	5	10	11	0
West South Central	0	9	0	24	5	5	0	14	10	28
Mountain	9	0	0	0	[11] 0	9	9	0	9	0
Pacific	0	4	0	4	0	11	0	0	7	7

PNEUMONIA DEATH RATES

	July 25, 1925	July 24, 1926	Aug. 1, 1925	July 31, 1926	Aug. 8, 1925	Aug. 7, 1926	Aug. 15, 1925	Aug. 14, 1926	Aug. 22, 1925	Aug. 21, 1926
96 cities	48	[2] 54	[3] 59	[2] 48	[11] 52	[5] 54	60	[5] 50	53	[5] 54
New England	50	88	53	36	36	54	29	31	38	40
Middle Atlantic	51	64	65	41	65	56	73	62	65	58
East North Central	37	46	48	48	36	[7] 42	47	[7] 36	40	[7] 34
West North Central	40	[2] 40	40	[2] 57	51	[9] 51	42	[9] 25	30	[9] 49
South Atlantic	52	58	[3] 60	51	50	68	73	56	60	86
East South Central	58	99	68	62	68	52	58	52	74	86
West South Central	63	57	116	76	68	104	82	113	77	71
Mountain	55	64	74	55	[11] 28	64	55	82	65	82
Pacific	58	85	62	71	69	57	80	39	47	78

[2] Sioux Falls, S. Dak., not included.
[3] Tampa, Fla., not included.
[4] Waterloo, Iowa, and Helena, Mont., not included.
[5] Madison, Wis., and Sioux Falls, S. Dak., not included.
[6] Madison, Wis., Sioux City, Iowa, Sioux Falls, S. Dak., and Fort Smith, Ark., not included.
[7] Madison, Wis., not included.
[8] Waterloo, Iowa, not included.
[9] Sioux City, Iowa, and Sioux Falls, S. Dak., not included.
[10] Fort Smith, Ark., not included.
[11] Helena, Mont., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	102	96	29, 930, 185	30, 458, 186	29, 251, 658	29, 764, 201
New England	12	12	2, 176, 124	2, 206, 124	2, 176, 124	2, 206, 124
Middle Atlantic	10	10	10, 346, 970	10, 476, 970	10, 346, 970	10, 476, 970
East North Central	16	16	7, 481, 656	7, 655, 436	7, 481, 656	7, 655, 436
West North Central	13	11	2, 580, 151	2, 619, 719	2, 461, 380	2, 499, 036
South Atlantic	21	21	2, 716, 070	2, 776, 070	2, 716, 070	2, 776, 070
East South Central	7	7	993, 103	1, 004, 953	993, 103	1, 004, 953
West South Central	8	6	1, 184, 057	1, 212, 057	1, 078, 198	1, 103, 605
Mountain	9	9	563, 912	572, 773	563, 912	572, 773
Pacific	6	4	1, 888, 142	1, 934, 084	1, 434, 245	1, 469, 144

FOREIGN AND INSULAR

CHOLERA ON VESSEL

Steamship "Macedonia"—Yokohama, Japan—August 5, 1926.—On August 5, 1926, a case of cholera was found on the steamship *Macedonia* at Yokohama, Japan. The *Macedonia* sailed from Singapore July 18, 1926.

THE FAR EAST

Report for week ended August 7, 1926.—The following report for the week ended August 7, 1926, was transmitted by the far eastern bureau of the health section of the secretariat of the League of Nations to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt—Alexandria	0	1	0	0	2	1
British India						
Bombay	----	0	----	0	7	3
Madras	----	0	----	1	12	----
Rangoon	----	5	----	1	0	0
Negapatam	----	0	----	3	0	0
Karachi	----	0	----	0	1	0
Vizagapatam	----	0	----	0	2	0
Siam—Bangkok	0	0	8	2	4	4
Dutch East Indies—						
Cheribon[1]	0	0	0	0	1	0
French Indo-China—						
Saigon and Cholon	1	0	1	0	0	0
China						
Amoy	2	----	0	0	0	0
Shanghai	----	----	----	----	----	----

[1] One plague-infected rat was found in the port during the week.

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Iraq.—Basra.

British India.—Chittagong, Cochin, Tuticorin.

Ceylon.—Colombo

Federated Malay States.—Port Swettenham.

Straits Settlements.—Penang, Singapore.

Dutch East Indies.—Batavia, Surabaya, Samarang, Belawan-Deli, Palembang, Sabang, Makassar, Menado, Banjermasin, Balik-Papan, Tarakan, Padang, Samarinda.

Sarawak.—Kuching.

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.

Portuguese Timor.—Dilly.

Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.

French Indo-China.—Turane, Haiphong.

China.—Hongkong.

Formosa.—Keelung.

Kwantung—Port Arthur, Dairen.
Japan—Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki
Korea.—Chemulpo, Fusan.
Manchuria.—Antung, Mukden, Changchun, Harbin.
U S S. R—Vladivostok

AUSTRALASIA AND OCEANIA

Australia—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island
New Guinea—Port Moresby
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia—Noumea.
Fiji—Suva
Hawaii—Honolulu

AFRICA

Egypt—Port Said, Suez
Anglo-Egyptian Sudan—Port Sudan, Suakin.
Eritrea—Massaua
French Somaliland—Jibuti
British Somaliland—Berbera
Italian Somaliland—Mogadiscio.
Kenya.—Mombasa
Zanzibar—Zanzibar.
Tanganyika—Dar-es-Salaam.
Seychelles.—Victoria
Mauritius—Port Louis
Madagascar—Tamatave, Majunga.
Portuguese East Africa—Mozambique, Beira, Lourenço-Marques
Union of South Africa—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

British India.—Calcutta
Dutch East Indies.—Pontianak.
China.—Shanghai.

ALGERIA

Plague—Bona—August 14, 1926.—A case of plague was reported, August 14, 1926, at Bona, Algeria.

CANADA

Communicable diseases—Week ended August 21, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in six Provinces of Canada for the week ended August 21, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Total
Cerebrospinal fever			1	1		1	3
Influenza	10						10
Poliomyelitis		2		2			4
Smallpox				7	2	1	10
Typhoid fever	2	4	7	9	6		28

Vital statistics—Quebec—June, 1926.—Births and deaths in the Province of Quebec for the month of June, 1926, have been reported as follows:

Estimated population	2,570,000
Births	6,653
Birth rate per 1,000 population	31 06
Deaths (all causes)	2,884
Death rate per 1,000 population	13 46
Deaths under 1 year	837
Infant mortality rate	125 80
Deaths from—	
Cancer	123
Cerebrospinal meningitis	10
Diabetes	20
Diphtheria	32
Deaths from—Continued.	
Heart diseases	404
Influenza	95
Measles	30
Poliomyelitis (infantile paralysis)	1
Scarlet fever	14
Syphilis	18
Tuberculosis (pulmonary)	235
Tuberculosis (other forms)	69
Typhoid fever	22
Whooping cough	41

CANARY ISLANDS

Plague—Teneriffe—August 2, 1926.—Information received under date of August 5, 1926, shows two cases of plague reported present August 2, 1926, at Teneriffe, Canary Islands, occurring in the Cristianos district.

CHINA

Cholera—Swatow.—During the week ended July 31, 1926, 14 cases of cholera were reported at Swatow, China. It was stated that the mortality from the disease was low.

ECUADOR

Plague—Guayaquil—July 16–31, 1926.—During the period July 16 to 31, 1926, five cases of plague with two deaths were reported at Guayaquil, Ecuador.

Plague-infected rats.—During the same period, of 10,148 rats taken 14 were found plague infected.

EGYPT

Plague—July 23–29, 1926.—Plague has been reported in Egypt as follows: In cities—Alexandria, July 27, two cases; Suez, July 29, two cases, bubonic; in Provinces—Behera, July 23–29, two cases, bubonic; Charkieh, July 27, one case fatal, septicemic; Minieh, July 24, one case, fatal, bubonic.

Plague in Egypt—January 1–July 29, 1926

Place	Cases	Deaths	Date of first case 1926	Date of last case 1926
City:				
Alexandria	5	1	Mar. 10	July 27
Suez	18	11	Mar. 27	July 29
Province:				
Behera	20	7	June 3	July 29
Beni-Suef	45	*24	May 10	July 15
Charkieh	1	1	June 27	July 27
Dakahlia	1	1	Apr. 22	May 22
Fayoum	1	1	May 4	May 4
Gharbieh	12	6	Mar. 9	June 2
Girgeh	6	4	June 26	July 3
Minieh	3	2	Mar. 4	July 24

FINLAND

Communicable diseases—June, 1926.—During the month of June, 1926, communicable diseases were reported in the Republic of Finland as follows:

Disease	Cases	Disease	Cases
Diphtheria	42	Poliomyelitis	3
Dysentery	6	Scarlet fever	96
Lethargic encephalitis	2	Typhoid fever	40
Paratyphoid fever	135		

FRANCE

Plague—Saint Ouen—August 14, 1926.—Two cases of plague were reported at St Ouen, a suburb of Paris, France, August 14, 1926.

GERMANY

Mortality—Karlsruhe, Baden—Year 1925 (comparative)—Information received under date of July 30, 1926, relative to vital statistics of the city of Karlsruhe, Baden, shows for the year 1925 the occurrence of 1,748 deaths from all causes in a population of 144,700; previous year, 1,738. For the years 1918, 1921, and 1923 the number of deaths were 2,320, 1,907, and 1,962, respectively. The decrease for the years 1924 and 1925 was stated to have been mainly due to decreased infant mortality, and this improvement was attributed to improved living conditions and better education in the care and treatment of infants

Causes of death—During the year 1925 tuberculosis caused 206 deaths, of which 167 were of tuberculosis of the lungs and larynx.

Cancer.—Increased mortality from cancer has been noted. In 1924 there were reported 206 deaths from cancer; in 1925 the number fell to 199; from 1920 to 1923 the number varied from 154 to 146.

GUATEMALA

Gastroenteritis—Guatemala—July, 1926.—During the month of July, 27 deaths from gastroenteritis were reported at Guatemala. Population, 220,000.

JAPAN

Further relative to plague at Yokohama.—Under date of August 7, 1926, two additional cases of plague [1] were reported at Yokohama, Japan, occurring within the city limits but not at the same distance from the original focus. One case occurred in a coolie employed in the canal section and one in an employee of a silk warehouse, a large reinforced building outside the customs compound.

[1] Public Health Reports, Aug. 27, 1926, p. 1867.

MEXICO

Gastroenteritis — Chihuahua — Mazatlan — August 16–22, 1926.—During the week ended August 22, 1926, 7 deaths from gastroenteritis were reported at Chihuahua and 7 at Mazatlan, Mexico. Population, 48,000 and 25,000, respectively.

VENEZUELA

Gastroenteritis—Caracas—July, 1926.—During the month of July, 1926, 58 deaths from gastroenteritis were reported at Caracas, Venezuela. Of these, 42 deaths were in children under two years of age; 16 were in persons over two years.

VIRGIN ISLANDS

Communicable diseases—July, 1926.—Communicable diseases were reported in the Virgin Islands of the United States during the month of July, 1926, as follows:

Island and disease	Cases	Remarks
St Thomas and St John		
Chancroid	1	St. Croix.
Gonorrhea	4	St John, 1.
Syphilis	3	Secondary.
Tuberculosis	2	Chronic pulmonary
St Croix:		
Chancroid	6	
Gonorrhea	3	
Leprosy	1	
Mumps	2	

YUGOSLAVIA

Communicable diseases—July, 1926.—During the month of July, 1926, communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	31	4	Rabies	4	4
Cerebrospinal meningitis	6	9	Scarlet fever	285	68
Diphtheria	97	8	Tetanus	80	19
Dysentery	166	16	Typhoid fever	198	23
Glanders	1	1	Typhus fever	2	1
Measles	277	6	Whooping cough	225	3

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended September 10, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China.				
Shanghai	July 25-Aug 1	8	189	Cases, foreign, deaths, native and foreign
Swatow	July 18-24		48	Reported by police Possibly not all actually cholera cases
Do	July 25-31	14		Mortality stated to be low
Tsingtao	do		1	
India				
Bombay	July 18-24	1	1	
Indo-China				
Saigon	July 4-17	8	2	
On vessel				
Steamship Macedonia	Aug 5	1		At Yokohama, Japan Vessel sailed from Singapore July 18, 1926

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria:				
Bona	Aug 14	1		
British East Africa				
Uganda				Apr 1-30, 1926 Cases, 100, deaths, 88 May, 1926 Cases, 314, deaths, 234
Canary Islands.				
Teneriffe	Aug 2	2		
China.				
Foochow	July 11-24			Present, not epidemic.
Swatow	July 25-31	14		
Ecuador				
Guayaquil	July 16-31	5	2	Rats taken, 10,146, found infected, 14
Egypt				Jan 1-July 22, 1926 Cases, 104; for corresponding period, 1925-Cases, 88
City—				
Alexandria	July 27	2		
Suez	July 29	2		Bubonic
Province				
Behera	July 23-29	2		Do
Charkieh	July 27	1	1	Septicemic
Minieh	July 24	1	1	Bubonic
France:				
Saint Ouen	Aug 14	2		Suburb of Paris.
Greece:				
Patras	July 25-Aug 7	5	2	
India				
Bombay	July 18-24	1	1	
Madras Presidency	July 4-10	28	15	
Iraq:				
Baghdad	July 18 24	1	1	
Japan				
Yokohama	Aug 7	2		
Java:				
Batavia	July 10-16	7	7	Province

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Belgium:				
Antwerp	Aug 1-7	1	1	
Brazil				
Bahia	July 11-17	1		
Pernambuco	July 11-17	1		
Rio de Janeiro	July 4-10	54	22	Jan 1-July 31, 1926 Cases, 1,379, deaths, 689
Do	July 11-17	126	48	
Do	July 18-24	142	80	
Do	July 25-31	186	85	

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended September 10, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika				May, 1926: Cases, 252; deaths, 48.
Uganda				April, 1926: One case. May, 1926: One case.
Canada				
British Columbia—				
Vancouver	Aug. 16-22	2		
Manitoba				Aug. 15-21, 1926: Cases, 2.
Winnipeg	Aug. 15-28	5		
Ontario				Aug. 15-21, 1926: Cases, 7.
Saskatchewan				Aug. 15-21, 1926. Case, 1.
China				
Chungking	July 18-31			Present.
Foochow	July 11-24			Do.
Manchuria—				
Harbin	July 22-28	5		
South Manchurian Ry.	July 25-31	5		At stations.
Swatow	July 18-31			Sporadic.
Great Britain				
England and Wales				Aug. 1-14, 1926: Cases, 134.
Sheffield	Aug. 1-7	1		
India				
Bombay	July 18-24	16	4	
Madras	July 25-31	3	1	
Java				
East Java and Madoera	June 19-July 3	22	1	
Mexico				
Mexico City	July 25-31	1		Including municipalities in Federal district.
Siam				
Bangkok	July 11-17	9	7	

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Chile				
Concepcion	June 1-7		1	
China				
Antung	July 26-Aug. 1	3		
Egypt				
Alexandria	July 16-22	1		
Cairo	Feb. 18-25	47	7	
Mexico				
Mexico City	July 25-31	3		Including municipalities in Federal district.
Palestine:				
Majdal District	July 27-Aug. 2	1		
Yugoslavia	July 1-31	2	1	

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil:				
Bahia	July 4-10	1		

Reports Received from June 26 to September 3, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr. 18-May 29, 1926: Cases, 31; deaths, 29.
China:				
Shanghai	Reported July 20	35	8	
Swatow	July 11-17		15	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 3, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
French Settlements in India				Mar 7-May 15, 1926 Cases, 19; deaths, 18
India				Apr 25-June 26, 1926 Cases, 18,526, deaths, 11,53[illegible]
Bombay	May 30-June 5	1	1	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-July 10	87	82	
Madras	May 16-June 5	2	1	
Rangoon	May 9-June 26	67	44	
Do	June 27-July 10	16	17	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-July 3	19	14	
Japan				
Yokohama	Aug 25	1		
Philippine Islands				
Manila	May 18-24	2	2	
Do	June 27-July 17	4	1	
Provinces—				
Albay	Apr 18-24	1	1	
Mindoro	Feb 21 Mar. 6	3	3	
Romblon	Dec 14 31	42	43	
Do	Jan 2-23	16	12	
Siam				
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-July 10	54	22	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported.
Azores:				
Fayal Island—				
Horta	Aug. 2-8	1	1	
St Michaels Island	May 9-June 26	7	2	
British East Africa.				
Kisumu	May 16-22	1	1	
Uganda	Mar. 1-31	35	34	
Ceylon:				
Colombo	May 29-June 5	1	1	
Chile.				
Iquique	June 20-26		1	
China:				
Amoy	Apr. 18-June 26	40	30	
Do.	June 27-July 24	21		
Foochow	June 6-12			Several cases Not epidemic.
Nanking	May 9-July 24			Prevalent
Ecuador:				
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1-15			Rats taken, 10,020; found infected, 8
Egypt				Jan 1-July 8, 1926: Cases, 100
City -				
Suez	May 21-July 1	9	5	
Provinces –				
Beni-Suef	May 28-June 8	8	2	
Gharbieh	June 2	1	1	
France:				
Marseille	July 8	1	1	Reported July 24
St. Denis	Reported Aug 2	1		Vicinity of Paris.
Greece:				
Athens	Apr. 1-May 31	16	4	Including Piræus.
Patras	May 27-June 12	4	1	
Zante	May 17	1		
Hawaii:				
Paauhau	July 18-24			Plague-infected rat trapped.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 3, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
India				Apr 25-June 26, 1926 Cases, 53,001, deaths, 41,576.
Bombay	May 2-June 26	16	15	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	162	93	
Do	July 18-24	18	12	
Rangoon	May 9-June 26	20	15	
Do	June 27-July 10	3	4	
Indo-China				
Saigon	May 23-June 26	8	3	
Iraq				
Baghdad	Apr 18-June 12	161	108	
Japan				
Yokohama	July 2-30	9	5	Total July 2-Aug. 2, 1926: Cases, 9, deaths, 7.
Java:				
Batavia	Apr 24-June 19	65	65	
Do	June 26-July 9	18	17	
Cheribon	Apr 11-24	3	3	
East Java and Madoera	June 13-19	1	1	
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic.
Moramanga Province	Apr 1-15	2	2	Do
Tananarive Province				Apr 1-June 15, 1926 Cases, 120, deaths, 111
Tamatave (Port)	May 16-31	1	1	
Tananarive Town	Apr. 1-May 15	6	6	
Other localities	do	80	77	Bubonic, pneumonic, septicemic.
Nigeria				Feb 1-Apr 30, 1926. Cases, 115, deaths, 92
Peru				May-June, 1926: Cases, 57, deaths, 16.
Departments—				
Ancash	May 1-31			Present.
Cajamarca	May 1-June 30	10	4	
Ica	May 1-31	1		
Libertad	do	4		Pacasmayo, cases, 2; Trujillo district, cases, 2
Lima	May 1-June 30	29	12	
Piura	June 1-30	13		In Huancabamba district.
Russia				Jan. 1-Mar 31, 1926 Cases, 37.
Senegal				Nov. 1-30, 1926. Cases, 3, deaths, 2. Mar 1-Apr. 30, 1926. Cases, 15; deaths, 4.
Siam				
Bangkok	May 23-June 26	2	2	
Straits Settlements				
Singapore	May 2-8	1	1	
Syria				
Beirut	July 1-10	1		
Tunisia	May 11-June 20	150		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan.
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-July 3	1		
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District—				
Protestpan	May 9-22	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	May 21-June 30	14		
Do	July 1-10	1		
Bolivia:				
La Paz	May 1-June 30	14	7	
Brazil:				
Bahia	June 20-26	1		
Do	June 27-July 10	1	7	
Manaos	Apr. 1-30		5	
[illegible]	May 16-June 26	26	25	
Do	June 27-July 31	14	8	
Rio de Janeiro	May 2-June 19	132	91	
Santos	Mar. 1-7		1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 3, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
British East Africa:				
Tanganyika	May 2-22		12	
Uganda	Mar. 1-31	1		
British South Africa:				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-11	5		
Canada				May 30-June 12, 1926: Cases, 46
Alberta	May 30-June 12	3		
Do	June 27-July 1	1		
Manitoba	May 30-June 26	24		
Do	June 27-July 24	7		
Winnipeg	June 6-12	5	1	
Do	July 1-17	6		
Ontario				May 30-June 26, 1926: Cases, 36. June 27-Aug. 14: Cases, 49
Fort William	July 25-Aug. 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2	1	
Kitchener	Apr. 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr. 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
Saskatchewan				May 30-June 19, 1926: Cases, 16. June 27-Aug. 14: Cases, 37
Regina	July 4-10	2		
Ceylon				Mar. 14-May 29, 1926: Cases, 44; deaths, 3
Chile:				
Antofagasta	June 6-12	1		
China:				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Chungking	May 2-July 17			Present.
Foochow	May 2-July 10			Do.
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 6-24	13		Railway stations.
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 15-June 19	5		
Changchun	May 1[illegible]-June 26	6		Do.
Do	June 27-July 3	1		Do.
Dairen	Apr. 26-June 20	69	16	
Do	June 28-July 18	3	2	
Fushun	May 16-June 5	4		Do.
Harbin	May 14-June 30	21		Do.
Do	July 1-21	7		
Kai-yuan	May 16-June 30	10		Do.
Kungchuling	June 13-19	1		Do.
Liao-yang	May 16-June 30	4		Do.
Mukden	do	4		Do.
Penhsihu	May 16-June 19	4		Do.
Ssupingkai	May 16-June 30	2		Do.
Teshihchiao	do	2		Do.
Wa-feng-tien	do	3		Do.
Nanking	May 8-July 24			Present.
Shanghai	May 2-June 26	10	25	Cases foreign. Deaths, population of international concession, foreign and native.
Do	June 27-July 24	3	3	
Swatow	May 9-July 10			Sporadic.
Tientsin	June 2-26		1	Reported by British municipality.
Wanshien	May 1			Prevalent.
Chosen				Mar. 1-Apr. 30, 1926: Cases, 368; deaths, 85
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt:				
Alexandria	May 15-July 1	18	3	
Cairo	Jan. 29-Feb. 4	1	1	
Esthonia				May 1-June 30, 1926: Cases, 3.
France				Mar. 1-Apr. 30, 1926: Cases, 92.
St. Etienne	Apr. 18-June 15	7	3	
French Settlements in India	Mar. 7-May 15	205	205	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 3, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Gold Coast	Mar 1-Apr 30	626	13	
Great Britain				
England and Wales				May 23-July 3, 1926: Cases, 1,018. July 1-31, 1926: Cases, 376.
Bradford	May 23-29	1		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-17	1		
Nottingham	May 2-June 5	7		
Sheffield	June 13-19	1		
Do	July 4-10	1		
Greece				
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr 25-June 26, 1926: Cases, 51,851; deaths, 14,771
Bombay	May 2-June 26	250	131	
Do	June 27-July 17	54	30	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-26	21	18	
Do	June 27-July 10	13	12	
Karachi	May 16-June 26	44	18	
Do	June 27-July 24	8	4	
Madras	May 16-June 26	7	4	
Do	June 27-July 24	6	3	
Rangoon	May 9-June 26	10	5	
Do	July 4-10	1		
Indo-China				
Saigon	do	2		
Iraq				
Baghdad	May 9-June 26	8	3	
Do	July 4-10	1	1	
Basra	Apr 18-June 22	34	25	
Italy				Mar 28-June 5, 1926: Cases, 20.
Rome	June 14-20	4		Entire consular district, including Island of Sardinia
Jamaica				Apr. 27-June 26, 1926: Cases, 201. (Reported as alastrim.)
Do				June 27-July 31, 1926: Cases, 85. (Reported as alastrim.)
Japan				Apr 11-May 29, 1926: Cases, 564.
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Tokyo	June 26-July 3	2		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-June 25	2		Province
East Java and Madoera	Apr 11-June 19	75	5	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Latvia				Apr 1-30, 1926: Cases, 3.
Mexico				Feb 1-Mar 31, 1926: Deaths, 602
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-Aug 16		5	
Mexico City	May 16-June 5	3		Including municipalities in Federal District.
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan. 1-June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 1-Aug 14		9	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Do	July 1-31		5	
Netherlands				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-Apr. 30, 1926: Cases, 404; deaths, 33.
Persia				
Teheran	Apr. 21-May 21		7	
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May 1, 1926: Cases, 12; deaths, 1.
Portugal:				
Lisbon	Apr. 28-June 19	10	3	
Oporto	May 23-June 5	4		
Do	July 11-24	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 3, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Russia				Jan 1-Mar 31, 1926 Cases, 2,103
Siam				
Bangkok	May 2-June 12	23	20	
Do	July 4-10	15	16	
Straits Settlements				
Singapore	Apr 25-May 1	1		
Switzerland				
Lucerne Canton	June 1-30	1		
Tunisia				Apr 1-June 30, 1926 Cases, 17
Union of South Africa				
Cape Province	June 20-26			Outbreaks
Idutya district	May 23-29			Do
Orange Free State	June 20-July 3			Do
Natal	May 30-June 5			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Johannesburg	May 9-June 12	5		
Do	July 11-17	1		
Yugoslavia				Apr 15-30, 1926 Cases, 2, deaths, 1
On vessel				Three cases, 1 death, at Aden, Arabia, stated to have been imported by sea
S S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed At Durban, Union of South Africa, June 16, 1926 One suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Argentina				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Bulgaria				Mar 1-Apr 30, 1926 Cases, 64, deaths, 12
Chile.				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Valparaiso	Apr. 29-May 5		1	
China				
Antung	June 14-27	7	1	
Do	June 28-July 18	14	1	
Canton	May 1-31	1		
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1-Apr 30, 1926 Cases, 640, deaths, 66.
Chemulpo	May 1-June 30	38	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Czechoslovakia				Jan 1-May 31, 1926: Cases, 154; deaths, 4
Egypt				
Port Said	June 4-24	4	1	
Do	July 9-15	3	1	
Cairo	Jan 29-Feb 18	8	4	
Great Britain				
Scotland—				
Glasgow	July 30-Aug 7	9		In same family.
Ireland (Irish Free State):				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerry County—				
Dingle	June 27-July 3	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 3, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Italy				Mar 28-May 8, 1926 Cases, 3
Japan				Mar 28-May 29, 1926 Cases, 37.
Latvia				May 1-June 30, 1926 Cases, 19
Lithuania				Mar 1-May 31, 1926 Cases, 172, deaths, 21
Mexico				Feb 1-Mar 31, 1926 Deaths, [illegible]
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal District
Do	June 13-19	9		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-May 31, 1926 Cases, 414.
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces
Gaza	July 6-12	1		
Haifa	July 13-19	1		
Jaffa District	June 15-28	5		
Majdal District	July 13-19	1		
Nazareth District	do	3		
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85
Rumania				Mar 1-Apr 30, 1926 Cases, 395; deaths, 19
Russia				Jan 1-Mar 31, 1926 Cases, 14,814
Tunisia				Apr 1-June 30, 1926 Cases, 110.
Tunis	June 11-30	3		
Turkey				
Constantinople	June 16-22	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153; deaths, 19.
Cape Province				Apr. 1-May 31, 1926 Cases, 116; deaths, 15. Native.
Do	May 31-July 3			Outbreaks
Glengray District	June 27-July 3			Do
Grahamstown	do	1		Sporadic
Natal				Apr 1-May 31, 1926 Cases, 17. Native
Orange Free State				Apr 1-May 31, 1926. Cases, 15; deaths, 1
Do	June 6-12			Outbreaks
Transvaal				Apr 1-30, 1926 Cases, 3, deaths, 3 Native.
Wakkerstroom district	June 20-26			Outbreaks
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926. Cases, 48; deaths, 7
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas.
Bahia	May 9-29	4	3	
Do	June 6-26	6	4	
Gold Coast	Apr 1-10	3	1	

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TREASURY DEPARTMENT

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SEPTEMBER 17 - 1926

SPECIAL ARTICLE

Notifiable Diseases Reported in Large Cities, 1926

WASHINGTON
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1926

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen B J LLOYD, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912

They contain (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world. (2) Articles relating to the cause, prevention, or control of disease. (3) Other pertinent information regarding sanitation and the conservation of the public health

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PUBLIC HEALTH REPORTS

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THE NOTIFIABLE DISEASES

PREVALENCE DURING 1925 IN CITIES OF OVER 100,000

The following tables were compiled from data furnished by the health officers of the cities They include all cities of 100,000 population or over in the United States

The following is a list of the diseases included·

Anthrax.	Pneumonia (all forms)
Cerebrospinal fever	Poliomyelitis
Chicken pox	Rabies in animals.
Dengue	Rabies in man
Diphtheria.	Scarlet fever
Influenza.	Septic sore throat.
Lethargic encephalitis.	Smallpox.
Malaria	Tuberculosis (all forms and pulmonary).
Measles	Typhoid fever
Mumps	Typhus fever
Pellagra.	Whooping cough.

The populations given, and which were used in computing the rates, were estimated as of July 1, 1925 Estimates of population by the Bureau of the Census are based upon the assumption that the annual increase in the population of any city since 1920 is equal to the annual increase between 1910 and 1920 as shown by the returns of the two Federal censuses. This method gives an estimate which is approximately correct for most of the cities. In a few cases, however, where there is reason to believe that the results thus obtained are far from correct, no estimate is made. The number of cases and deaths occurring from each disease in these cities is given but no rates are computed.

The estimated expectancy given in the tables for some of the diseases is the result of an attempt to ascertain from the experience of recent years how many cases of the disease under consideration might be expected in 1925 In most instances the estimated expectancy is the median number of cases reported by the city for the years 1918 to 1924, inclusive. When several epidemics have occurred

during these years, or when for other reasons the median is not satisfactory, epidemic years are excluded, and the estimated expectancy is the mean of the number of cases reported for the nonepidemic years The aim has been to ascertain how many cases of each disease may reasonably be expected in the absence of epidemics.

The column headed "Number of years" shows the number of years for which data were available for each city.

In comparing the figures for 1925 with the estimated expectancy, averages, or with reports for preceding years, it should be borne in mind that for several years there has been a gradual improvement in the reporting of communicable diseases An increase in the number of cases reported may be due to better reporting rather than to an increase in the number of cases occurring

In studying these tables it should be kept in mind that a relatively large number of reported cases of a communicable disease as indicated by a high case rate (and more especially when accompanied by a relatively small number of deaths, as indicated by a low fatality rate) usually means that the health department of that city is active and that the cases of the disease are being well reported by the practicing physicians. It does not usually mean that the disease is more prevalent in that city than in other cities A high fatality rate may mean that the disease was unusually virulent in a city; that the physicians did not treat the disease in that city with the success usual elsewhere; or that the practicing physicians did not report all of their cases to the health department. On the other hand, an unusually low fatality rate may be due to the fact that the disease in the city was unusually mild; that the physicians treated it with unusual success; that the practicing physicians reported their cases satisfactorily; or that the registration of deaths was incomplete or the assignment of the causes of death inaccurate.

Cities which did not report either cases or deaths of a certain disease in 1925 (except smallpox) are not included in the table for that disease

The following table gives a comparison of the rates for some of the principal communicable diseases in the large cities of the United States for the years 1922, 1923, 1924, and 1925:

	Cases		Deaths	
	Number of cities	Cases per 1,000 population	Number of cities	Deaths per 1,000 population
Chicken pox:				
1922	68	1.60	68	0.001
1923	77	2.02	77	.001
1924	82	2.45	82	.001
1925	69	1.89	69	.001
Diphtheria:				
1922	73	2.25	73	.16
1923	77	1.97	77	.13
1924	82	1.67	83	.11
1925	69	1.39	69	.10

	Cases		Deaths	
	Number of cities	Cases per 1 000 population	Number of cities	Deaths per 1,000 population
Influenza				
1922			70	0 16
1923			77	21
1924			80	10
1925			66	15
Lethargic encephalitis				
1924			68	02
1925			58	02
Measles				
1922	72	5 26	72	08
1923	77	7 11	77	08
1924	80	4 56	83	05
1925	69	3 32	69	.03
Mumps				
1922	66	72	66	.0005
1923	69	75	69	0005
1924	75	1 66	76	0006
1925	66	67	66	0006
Pneumonia (all forms)				
1922			74	1 36
1923			75	1 51
1924			83	1 35
1925			68	1 33
Poliomyelitis				
1924	66	07	72	01
1925	63	05	63	01
Scarlet fever				
1922	73	1 80	73	03
1923	77	2 07	77	04
1924	82	2 15	82	03
1925	68	2 26	68	03
Smallpox				
1922	75	17	75	0119
1923	78	18	78	0014
1924	83	50	83	0165
1925	69	25	69	0139
Tuberculosis (all forms)				
1922			72	1 01
1923			77	98
1924			82	96
1925			69	93
Tuberculosis (pulmonary)				
1922			64	87
1923			67	85
1924			70	82
1925			60	79
Typhoid fever				
1922	73	19	73	0329
1923	77	19	77	0327
1924	81	22	83	0341
1925	68	21	69	0348
Whooping cough				
1923	76	1 67	76	06
1924	77	1 56	81	.05
1925	65	1 68	68	06

Reported Prevalence for the Year 1925

ANTHRAX

City	Cases reported, 1925	Deaths registered, 1925
California		
Los Angeles		[1] 1
Delaware		
Wilmington	5	2
Illinois		
Chicago	3	1
Louisiana		
New Orleans	1	0
Massachusetts		
Lynn	3	0
New Jersey		
Camden	15	0
Jersey City	1	0
New York		
New York	3	1
Yonkers	2	0
Pennsylvania		
Philadelphia	14	1
Tennessee		
Memphis	1	0

[1] Nonresident

Reported Prevalence for the Year 1925—Continued

CEREBROSPINAL FEVER [1]

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Alabama								
Birmingham	206,000	7	11	5	0 02	5	0 02	100.0
California								
Los Angeles	--------	7	29	25	--------	10	--------	40 0
Oakland	254,000	5	4	4	02	0	--------	--------
San Diego	106,000	6	5	1	01	0	--------	--------
San Francisco	558,000	7	34	9	02	9	02	100 0
Colorado								
Denver	281,000	5	1	--------	--------	2	.01	--------
Connecticut								
Bridgeport	--------	7	11	3	--------	2	--------	66 7
Hartford	160,000	6	6	1	01	1	01	100 0
New Haven	179,000	6	12	4	02	0	--------	--------
Waterbury	--------	7	8	4	--------	3	--------	75 0
Delaware								
Wilmington	122,000	6	3	1	01	1	.01	100.0
District of Columbia								
Washington	498,000	6	6	4	01	1	.00	25 0
Illinois								
Chicago	2,995,000	5	61	43	.01	31	01	72 1
Indiana								
Indianapolis	359,000	7	4	4	01	3	01	75 0
Iowa								
Des Moines	141,000	--------	--------	1	01	0	--------	--------
Kansas								
Kansas City	116,000	7	8	14	12	13	11	92 9
Kentucky								
Louisville	306,000	6	8	7	02	4	01	57 1
Louisiana								
New Orleans	414,000	7	12	--------	--------	12	03	--------
Maryland								
Baltimore	796,000	6	25	20	03	14	02	70 0
Massachusetts								
Boston	780,000	7	42	42	05	24	.03	57 1
Cambridge	120,000	7	6	1	01	1	01	100 0
Fall River	129,000	6	10	1	01	1	.01	100 0
Lowell	110,000	6	7	6	05	4	.04	66 7
Lynn	103 000	6	7	3	03	2	02	66 7
Springfield	142,000	5	3	--------	--------	3	.02	--------
Worcester	191,000	7	5	4	02	3	02	75 0
Michigan								
Detroit	1,246,000	5	55	42	03	5	00	11 9
Minnesota								
Duluth	111,600	4	4	2	02	1	.01	50 0
Minneapolis	425,000	5	8	8	02	1	00	12 5
St Paul	246,000	7	4	3	01	0	--------	--------
Missouri								
Kansas City	367,000	5	11	13	04	4	01	30 8
St Louis	822,000	7	33	14	.02	6	01	42 9
Nebraska								
Omaha	212,000	--------	--------	2	.01	1	.00	50 0
New Jersey								
Elizabeth	--------	4	7	2	--------	1	--------	50 0
Jersey City	315,000	7	13	4	01	1	00	25 0
Newark	453,000	7	28	12	03	8	.02	66 7
Paterson	142,000	7	9	--------	--------	3	.02	--------
Trenton	132,000	7	4	1	01	1	01	100 0
New York								
Buffalo	538,000	7	17	12	02	7	01	58.3
New York	5,873,000	7	244	120	02	94	02	78.3
Rochester	317,000	5	7	--------	--------	1	.00	--------
Syracuse	182,000	7	2	--------	--------	2	01	--------
Utica	102,000	7	1	1	01	0	--------	--------
Yonkers	114 000	7	3	2	02	0	--------	--------
Ohio								
Akron	--------	6	5	--------	--------	2	--------	--------
Cincinnati	409,000	5	9	4	01	4	.01	100 0
Cleveland	936,000	6	20	31	03	17	.02	54 8
Columbus	280,000	5	3	6	02	2	.01	33.3
Dayton	173,000	6	4	2	.01	1	01	50.0
Toledo	287,000	5	2	2	01	1	.00	50 0
Youngstown	160,000	5	3	1	.01	1	.01	100.0

[1] Epidemic cerebrospinal meningitis, meningococcus meningitis

Reported Prevalence for the Year 1925—Continued

CEREBROSPINAL FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Oklahoma								
Oklahoma City		6	3	1		1		
Tulsa	124,000	2	4			4	0.03	
Oregon								
Portland		6	5	57		23		40.4
Pennsylvania								
Erie		7	1	4		3		75.0
Philadelphia	1,979,000	7	35	22	.01	13	.01	59.1
Pittsburgh	632,000	6	13	5	.01	4	.01	80.0
Scranton	142,000	6	3			6	.04	
Rhode Island								
Providence	268,000	7	13	6	.02	4	.01	66.7
Tennessee								
Memphis	175,000	7	10	[1] 7	.04	[1] 7	.04	100.0
Nashville	136,000	7	5	5	.04	4	.03	80.0
Texas								
Dallas	194,000	6	8			2	.01	
El Paso	105,000	3	2			1	.01	
Houston		5	4	3		0		
San Antonio	198,000					8	.04	
Utah								
Salt Lake City	131,000	5	4			16	.12	
Virginia								
Norfolk		7	3	3		2		66.7
Richmond	186,000	6	3	7	.01	5	.03	71.4
Washington								
Seattle		5	10			3		
Spokane	109,000	7	1	27	.25	16	.15	59.3
Tacoma	104,000	5	6	12	.12	6	.06	50.0
Wisconsin								
Milwaukee	50[illegible],000					10	.02	
Total								
46 cities	24,666,000		816	545	.02	330	.01	60.6
48 cities	2[illegible],019,000			548	.02	331	.01	60.4
61 cities	27,900,000					401	.02	
57 cities				650				
72 cities						451		

[1] One nonresident included

CHICKEN POX

City	Estimated population, July 1, 1925	Average, 1922–1924	1925				
			Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama							
Birmingham	206,000	275	287	1.39	0		
California							
Los Angeles		1,915	1,883		0		
Oakland	254,000	349	500	1.97	0		
San Diego	106,000	376	514	4.85	0		
San Francisco	558,000	1,236	1,365	2.45	1	0.00	1,365.0
Colorado							
Denver	281,000	[1] 1,039	820	2.92	0		
Connecticut							
Bridgeport		137	68		0		
Hartford	160,000	209	264	1.65	0		
New Haven	179,000	[1] 397	568	3.17	0		
Waterbury		81	29		0		

Reported Prevalence for the Year 1925—Continued

CHICKEN POX—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924	1925 Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Delaware							
Wilmington	122,000	163	101	0.83	0		
District of Columbia							
Washington	498,000	1,357	777	1.56	0		
Georgia							
Atlanta		81	160		0		
Illinois							
Chicago	2,995,000	4,671	3,481	1.16	13	0.00	268.0
Indiana							
Indianapolis	359,000	1,200	954	2.66	0		
Iowa							
Des Moines	141,000	[1] 23	22	.16	0		
Kansas							
Kansas City	116,000	205	225	1.94	0		
Kentucky:							
Louisville	306,000	198	116	.38	0		
Louisiana							
New Orleans	414,000	[2] 124	145	.35	0		
Maryland							
Baltimore	796,000	2,902	2,856	3.59	0		
Massachusetts							
Boston	780,000	1,699	1,516	1.94	2	.00	758.0
Cambridge	120,000	519	476	3.97	0		
Fall River	129,000	111	130	1.01	0		
Lowell	110,000	79	91	.83	0		
Lynn	103,000	82	62	.60	0		
New Bedford	120,000	103	128	1.07	1	.01	128.0
Springfield	142,000	259	180	1.27	0		
Worcester	191,000	320	550	2.88	0		
Michigan							
Detroit	1,246,000	2,371	2,239	1.80	3	.00	746.3
Flint	130,000	380	218	1.68	0		
Grand Rapids	154,000	293	254	1.65	0		
Minnesota							
Duluth	111,000	337	438	3.95	0		
Minneapolis	425,000	2,535	2,465	5.80	4	.01	616.2
St. Paul	246,000	1,038	1,123	4.57	1	.00	1,123.0
Missouri							
Kansas City	367,000	378	614	1.67	0		
St. Louis	822,000	1,136	1,060	1.29	0		
Nebraska							
Omaha	212,000	238	374	1.76	0		
New Jersey							
Camden	129,000	178	248	1.92	0		
Elizabeth		272	243		0		
Jersey City	315,000	202	197	.63	1	.00	197.0
Newark	453,000	1,428	1,418	3.13	0		
Paterson	142,000	382	195	1.37	0		
Trenton	132,000	119	131	.99	0		
New York							
Albany	118,000	421	280	2.37	1	.01	280.0
Buffalo	538,000	934	574	1.07	0		
New York	5,873,000	7,556	7,540	1.28	11	.00	686.0
Rochester	317,000	364	415	1.31	0		
Syracuse	182,000	478	598	3.29	0		
Utica	102,000	272	207	2.03	0		
Yonkers	114,000	201	154	1.35	0		
Ohio							
Akron		386	134		0		
Canton	106,000	429	217	2.05	0		
Cincinnati	409,000	505	472	1.15	0		
Cleveland	936,000	2,522	3,098	3.31	2	.00	1,549.0
Columbus	280,000	[1] 297	338	1.21	0		
Dayton	173,000	148	96	.55	0		
Toledo	287,000	1,200	869	3.03	0		
Youngstown	160,000	341	287	1.79	0		
Oklahoma:							
Oklahoma City		130	67		0		
Tulsa	124,000	[1] 40	250	2.02	0		
Oregon							
Portland		537	467		0		

[1] 2 years only. [2] 1 year only.

Reported Prevalence for the Year 1925—Continued

CHICKEN POX—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924	1925				
			Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Pennsylvania							
Erie		465	425		0		
Philadelphia	1,979,000	4,171	3,705	1.87	2	0.00	1,852.5
Pittsburgh	632,000	2,325	1,474	2.33	0		
Reading	113,000	375	501	4.43			
Scranton	142,000	98	144	1.01	0		
Rhode Island							
Providence	268,000	95	185	.69	0		
Tennessee							
Memphis	175,000	501	313	1.79	0		
Nashville	136,000	84	36	.26	0		
Texas							
Dallas	194,000	483	585	3.02	0		
El Paso	105,000	[1] 304	165	1.57	0		
Fort Worth	155,000	[1] 46	162	1.05	0		
Houston		[1] 26	61		0		
San Antonio	198,000	23	22	.11	0		
Utah							
Salt Lake City	131,000	965	1,440	10.99	0		
Virginia							
Norfolk		184	574		0		
Richmond	186,000	208	195	1.05	0		
Washington							
Seattle		932	1,733		0		
Spokane	109,000	553	678	6.22	0		
Tacoma	104,000	236	139	1.34	0		
Wisconsin							
Milwaukee	509,000	2,002	2,393	4.70	0		
Total							
69 cities	23,925,000	57,168	54,643	1.89	42	.00	1,301.0
81 cities		62,327	60,487		42		1,440.2

[1] Two years only

DENGUE

City	Cases reported, 1925	Deaths registered, 1925	City	Cases reported, 1925	Deaths registered, 1925
Alabama			Texas		
Birmingham	2	0	Dallas	4	0
Louisiana			Houston	1	0
New Orleans	5	0	San Antonio	1	0
Pennsylvania					
Pittsburgh		1			

DIPHTHERIA

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Alabama								
Birmingham	206,000	7	216	143	0.69	12	0.06	8.4
California								
Los Angeles		7	2,076	1,351		74		5.5
Oakland	254,000	7	534	376	1.48	13	.05	3.5
San Diego	106,000	7	111	123	1.16	7	.07	5.7
San Francisco	558,000	7	1,272	623	1.12	37	.07	5.9

Reported Prevalence for the Year 1925—Continued

DIPHTHERIA—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Colorado:								
Denver	281,000	7	731	432	1.54	44	0.16	10.2
Connecticut:								
Bridgeport		7	420	254		18		7.1
Hartford	160,000	7	374	259	1.62	6	.04	2.3
New Haven	179,000	7	209	26	.15	3	.02	11.5
Waterbury		7	275	171		5		2.9
Delaware:								
Wilmington	122,000	7	153	207	1.70	25	.20	12.1
District of Columbia:								
Washington	498,000	7	713	685	1.38	37	.07	5.4
Georgia:								
Atlanta		7	223	141		11		7.8
Illinois:								
Chicago	2,995,000	7	6,361	2,926	.98	240	.08	8.2
Indiana:								
Indianapolis	359,000	7	680	217	.60	24	.07	11.1
Iowa:								
Des Moines	141,000	5	194	188	1.33	15	.11	8.0
Kansas:								
Kansas City	116,000	7	188	94	.81	5	.04	5.3
Kentucky:								
Louisville	306,000	7	538	165	.54	13	.04	7.9
Louisiana:								
New Orleans	414,000	7	591	433	1.05	23	.06	5.3
Maryland:								
Baltimore	796,000	7	1,423	897	1.13	48	.06	5.4
Massachusetts:								
Boston	780,000	7	2,832	1,256	1.61	99	.13	7.9
Cambridge	120,000	7	236	169	1.41	7	.06	4.1
Fall River	129,000	7	223	133	1.03	15	.12	11.3
Lowell	110,000	7	213	50	.45	4	.04	8.0
Lynn	103,000	6	202	151	1.47	9	.09	6.0
New Bedford	120,000	7	144	101	.84	9	.07	8.9
Springfield	142,000	7	171	75	.53	6	.04	8.0
Worcester	191,000	7	282	309	1.62	28	.15	9.1
Michigan:								
Detroit	1,246,000	7	2,874	1,615	1.30	118	.09	7.3
Flint	130,000	6	498	109	.84	5	.04	4.6
Grand Rapids	154,000	7	307	66	.43	7	.05	10.6
Minnesota:								
Duluth	111,000	7	191	15	.14	0		
Minneapolis	425,000	7	1,138	1,717	4.01	107	.25	6.2
St. Paul	246,000	7	918	790	3.21	35	.13	4.4
Missouri:								
Kansas City	367,000	6	438	224	.61	27	.07	12.1
St. Louis	822,000	7	2,274	2,131	2.59	92	.11	4.3
Nebraska:								
Omaha	212,000	6	388	163	.77	25	.12	15.3
New Jersey:								
Camden	129,000	7	247	237	1.84	27	.21	11.4
Elizabeth		7	278	139		9		6.5
Jersey City	315,000	6	757	829	2.63	43	.14	5.2
Newark	453,000	7	974	509	1.12	42	.09	8.3
Paterson	142,000	7	292	139	.98	9	.06	6.5
Trenton	132,000	7	247	81	.61	8	.06	9.9
New York:								
Albany	118,000	7	212	144	1.22	8	.07	5.6
Buffalo	538,000	7	975	356	.66	31	.06	8.7
New York	5,873,000	7	11,455	9,051	1.54	663	.11	7.3
Rochester	317,000	7	499	410	1.29	52	.16	12.7
Syracuse	182,000	7	454	139	.76	5	.03	3.6
Utica	102,000	7	315	415	4.07	23	.23	5.5
Yonkers	114,000	7	206	227	1.99	11	.10	4.8
Ohio:								
Akron		7	294	128		5		3.9
Canton	106,000	7	213	107	1.01	8	.08	7.5
Cincinnati	409,000	7	659	351	.86	14	.03	4.0
Cleveland	936,000	7	1,621	1,746	1.87	138	.15	7.9
Columbus	280,000	7	348	115	.41	8	.03	7.0
Dayton	173,000	7	211	118	.68	5	.03	4.2
Toledo	287,000	6	571	370	1.29	26	.09	7.0
Youngstown	160,000	7	202	68	.42	8	.05	11.8

Reported Prevalence for the Year 1925—Continued

DIPHTHERIA—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Oklahoma								
Oklahoma City	----------	6	116	72	-------	4	-------	5.6
Tulsa	124,000	3	79	92	0.74	10	0.08	10.9
Oregon								
Portland	----------	7	445	781	-------	38	-------	4.9
Pennsylvania								
Erie	----------	7	217	160	-------	12	-------	7.5
Philadelphia	1,979,000	7	3,368	3,887	1.96	315	16	8.1
Pittsburgh	632,000	7	1,321	697	1.10	58	09	8.3
Reading	113,000	7	200	87	77	13	12	14.9
Scranton	142,000	7	206	156	1.10	20	14	12.8
Rhode Island								
Providence	268,000	7	569	274	1.02	20	07	7.3
Tennessee								
Memphis	175,000	7	379	[1]100	57	15	03	5.0
Nashville	136,000	7	81	70	51	9	.07	12.9
Texas								
Dallas	194,000	7	338	299	1.54	7	04	2.3
El Paso	105,000	4	55	65	62	9	09	13.8
Fort Worth	155,000	7	139	85	55	9	06	10.6
Houston	----------	7	178	290	-------	17	-------	-------
San Antonio	198,000	6	175	113	59	15	08	13.3
Utah								
Salt Lake City	131,000	7	166	198	1.51	18	14	9.1
Virginia								
Norfolk	----------	7	145	57	-------	2	-------	3.5
Richmond	186,000	7	408	442	2.38	30	16	6.8
Washington								
Seattle	----------	7	380	214	-------	8	-------	3.7
Spokane	109,000	7	206	362	3.32	16	15	4.4
Tacoma	104,000	7	153	204	1.96	19	18	9.3
Wisconsin								
Milwaukee	509,000	7	1,017	884	1.74	59	12	6.7
Total								
69 cities	28,925,000	-------	56,938	40,295	1.39	2,906	10	7.2
81 cities	----------	-------	61,995	44,053	-------	3,109	-------	7.1

[1] Includes nonresidents

INFLUENZA

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama						
Birmingham	206,000	402	1.95	132	0.64	3.0
California						
Los Angeles	----------	611	----------	69	----------	8.9
Oakland	254,000	74	29	33	13	2.2
San Diego	106,000	53	50	20	.19	2.6
San Francisco	558,000	247	44	73	.13	3.4
Colorado						
Denver	281,000	----------	----------	112	40	----------
Connecticut						
Bridgeport	----------	39	----------	29	----------	1.3
Hartford	160,000	27	17	24	15	1.1
New Haven	179,000	33	18	11	.06	3.0
Waterbury	----------	----------	----------	18	----------	----------
District of Columbia						
Washington	498,000	----------	----------	61	.12	----------
Georgia						
Atlanta	----------	583	----------	36	----------	16.2
Illinois						
Chicago	2,995,000	1,100	37	270	09	4.1
Indiana						
Indianapolis	359,000	----------	----------	102	28	----------

Reported Prevalence for the Year 1925—Continued

INFLUENZA—Continued

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Iowa						
Des Moines	141,000	------	----	50	0 35	----------
Kansas						
Kansas City	116,000	77	0 66	17	15	4 5
Kentucky						
Louisville	306 000	109	36	19	06	5 7
Louisiana						
New Orleans	414,000	406	98	180	43	2 3
Maryland						
Baltimore	796,000	830	1 04	133	17	6 2
Massachusetts						
Boston	780,000	357	46	81	10	4 4
Cambridge	120 000	31	26	7	06	4 4
Fall River	129 000	60	47	29	22	2 1
Lowell	110 000	4	01	0	-	- -
Lynn	103 000	5	05	3	03	1 7
New Bedford	120,000	4	03	0	-	- ---
Springfield	142,000	42	39	41	29	1 0
Worcester	191,000	32	17	11	06	2 9
Michigan						
Detroit	1 246 000	230	18	127	10	1 8
Flint	139 000	- ---	---- -	7	05	- - -
Grand Rapids	154,000	-------	- --- -	29	19	--
Minnesota						
Minneapolis	425,000	-- - -	-- - -	74	17	------
St Paul	246,000	--- --	- -	45	18	-- -
Missouri						
Kansas City	367,000	223	61	204	56	1 1
St Louis	822,000	32	04	20	02	1 6
Nebraska						
Omaha	212,000	------ -	---- --	1	00	- - ---
New Jersey						
Camden	120 000	- - -----	- ---- --	12	06	------
Elizabeth	-- -	-------	-- -- ---	8	-	- - --
Jersey City	315 000	- - -	- - -	40	13	
Newark	453 000	270	60	13	03	20 8
Paterson	142 000	28	20	13	09	2.2
Trenton	132,000	55	42	22	17	2.5
New York						
Albany	118,000	358	3 03	25	21	14.3
Buffalo	538,000	57	11	55	10	1 0
New York	5,873 000	1,715	30	665	11	2 [illegible]
Rochester	317,000	--- -	----- -	18	06	-----
Syracuse	182,000	---- -	- -	14	.08	-
Utica	102,000	12	12	3	03	4 0
Yonkers	114,000	- -	-	1	.01	- ---
Ohio						
Akron	- - - --	18	--	13	-	1.4
Canton	10[illegible],000	15	14	11	10	1.4
Cincinnati	409,000	- --- -	--	171	42	- - -
Cleveland	936,000	340	[illegible]	111	12	3.1
Columbus	280,000	----	-----	10[illegible]	.37	- ------
Dayton	173,000	- -	--	31	20	--
Toledo	287,000	---- -- -	- -	60	21	-- --
Youngstown	160,000	---- - -	- - --- -	22	.14	-- ----
Oklahoma						
Oklahoma City	------ -	276	--- - ---	27	- - -	10 2
Tulsa	124,000	----- ---	----- -- -	7	.06	- -- --
Oregon						
Portland	----------	204	-- -------	10	----- --	20.4
Pennsylvania						
Erie	----------	---------	- ---- ---	43	----- -	- -------
Philadelphia	1,979,000	---- -----	---------	199	10	--- ------
Pittsburgh	632 000	---------	---------	153	.24	---------
Reading	115,000	---------	---------	3	03	- - ------
Scranton	112,000	------ ---	-- -------	39	27	----------
Rhode Island						
Providence	268,000	36	.13	32	.12	1.1
Tennessee						
Memphis	175,000	---------	---------	[1] 121	.69	---------
Nashville	138,000	---------	---------	89	.65	-- -------

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

INFLUENZA—Continued

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Texas						
Dallas	194,000	347	1.79	59	0.30	5.9
El Paso	105,000			118	1.12	
Fort Worth	155,000			30	19	
Houston		9		6		1.5
San Antonio	198,000			50	25	
Utah						
Salt Lake City	131,000			22	17	
Virginia						
Richmond	186,000			36	19	
Washington						
Seattle				57		
Tacoma	104,000			5	05	
Wisconsin						
Milwaukee	509,000	42	08	10	08	1.0
Total						
34 cities	19,591,000	7,683	39	2,484	13	3.1
66 cities	28,583,000			4,314	15	
41 cities		9,423				
77 cities				4,630		

LETHARGIC ENCEPHALITIS

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama						
Birmingham	206,000	5	0.02	1	0.00	5.0
California						
Los Angeles		19		3		6.3
Oakland	254,000	3	.01	3	01	1.0
San Diego	106,000			9	08	
San Francisco	558,000	18	03	15	03	1.2
Colorado						
Denver	281,000			11	.04	
Connecticut						
Bridgeport		5		3		1.7
Hartford	160,000	6	04	4	02	1.5
New Haven	179,000	4	.02	2	01	2.0
Waterbury		7		7		1.0
District of Columbia						
Washington	498,000	16	.03	13	.03	1.2
Georgia						
Atlanta				2		
Illinois						
Chicago	2,995,000	49	.02	17	.01	2.9
Indiana						
Indianapolis	359,000			3	.01	
Iowa						
Des Moines	141,000			1	01	
Kansas						
Kansas City	116,000	1	01	1	01	1.0
Kentucky						
Louisville	306,000	3	.01	1	.00	3.0
Louisiana						
New Orleans	414,000	10	02	5	01	2.0
Maryland						
Baltimore	796,000	33	04	19	02	1.7
Massachusetts						
Boston	780,000	59	08	31	04	1.9
Fall River	129,000	7	05	6	05	1.2
Lowell	11[illegible],000	2	02	2	.02	1.0
Lynn	103,000	3	.03	2	02	1.5
New Bedford	120,000	1	01	0		
Springfield	142,000	8	06	5	04	1.6
Worcester	191,000	10	05	0		
Michigan						
Detroit	1,246,000	42	03	20	02	2.1
Grand Rapids	154,000			2	01	
Minnesota						
Duluth	111,000			8	.07	
Minneapolis	425,000			9	.02	
St Paul	246,000			16	.07	
Missouri						
Kansas City	367,000	13	04	9	02	1.4
St Louis	822,000	9	01	0		

Reported Prevalance for the Year 1925—Continued

LETHARGIC ENCEPHALITIS—Continued

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Nebraska						
Omaha	212,000			4	0.02	
New Jersey						
Camden	120,000	4	0.03	4	.03	1.0
Elizabeth				17		
Jersey City	315,000			4	.01	
Newark	453,000	32	.07	12	.03	2.7
Paterson	142,000			3	.02	
Trenton	132,000			3	.02	
New York						
Albany	118,000	13	.11	3	.03	4.3
Buffalo	538,000	17	.03	5	.01	3.4
New York	5,873,000	327	.06	185	.03	1.8
Rochester	317,000	9	.03	6	.02	1.5
Syracuse	182,000	1	.01	1	.01	1.0
Yonkers	114,000	2	.02	2	.02	1.0
Ohio						
Akron				1		
Canton	107,000	10	.09	10	.09	1.0
Cincinnati	409,000	8	.02	8	.02	1.0
Cleveland	936,000	18	.02	16	.02	1.1
Columbus	280,000			15	.05	
Toledo	287,000			6	.02	
Oregon						
Portland		14		4		3.5
Pennsylvania						
Erie		1		1		1.0
Philadelphia	1,979,000	42	.02	31	.02	1.4
Pittsburgh	632,000			12	.02	
Reading	113,000			1	.01	
Rhode Island						
Providence	268,000	7	.03	4	.01	1.7
Tennessee						
Memphis	175,000	[1] 5	.03	[1] 4	.02	1.2
Texas						
Dallas	194,000	4	.02	1	.01	4.0
Fort Worth	155,000			1	.01	
Houston		3		2		1.5
Utah						
Salt Lake City	131,000			7	.05	
Virginia						
Norfolk				6		
Richmond	186,000			1	.01	
Washington						
Seattle				7		
Spokane	109,000	26	.24	22	.20	1.2
Tacoma	104,000	1	.01	1	.01	1.0
Wisconsin						
Milwaukee	509,000	10	.02	6	.01	1.7
Total—						
39 cities	23,005,000	838	.04	477	.02	1.8
58 cities	27,413,000			593	.02	
45 cities		887				
60 cities				646		

[1] Includes nonresidents

MALARIA

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama						
Birmingham	206,000	74	0.36	3	0.01	24.7
California:						
Los Angeles		8		2		4.0
San Diego	106,000	3	.03	1	.01	3.0
San Francisco	558,000	1	.00	0		
Colorado:						
Denver	281,000			1	.00	
Connecticut:						
New Haven	170,000	2	.01	0		
Georgia						
Atlanta		111		1		111.0
Illinois						
Chicago	2,995,000	14	.00	4	.00	3.5

Reported Prevalence for the Year 1925—Continued

MALARIA—Continued

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Louisiana						
New Orleans	414,000	72	0.17	15	0.04	4.8
Maryland						
Baltimore	796,000	18	.02	0		
Massachusetts						
Boston	780,000	3	.00	1	.00	3.0
Lowell	110,000			1	.01	
Michigan						
Detroit	1,246,000	6	.00	0		
Flint	130,000	1	.01	0		
Missouri						
St. Louis	822,000			1	.00	
New Jersey						
Elizabeth		4		0		
Newark	453,000	4	.01	0		
Paterson	142,000	1	.01	0		
Trenton	132,000			1	.01	
New York						
New York	5,873,000	33	.01	6	.00	5.5
Rochester	317,000			1	.00	
Ohio						
Cleveland	936,000	3	.00	1	.00	3.0
Toledo	287,000			2	.01	
Oklahoma						
Oklahoma City				1		
Tulsa	124,000			2	.02	
Oregon						
Portland				2		
Pennsylvania						
Philadelphia	1,979,000			3	.00	
Tennessee						
Memphis	175,000	[1] 444	2.82	[1] 16	.09	27.7
Texas						
Dallas	194,000			8	.04	
Houston				7		
San Antonio	198,000			5	.03	
Virginia						
Norfolk		5		2		2.5
Richmond	186,000	5	.03	1	.01	5.0
Washington						
Seattle				1		
Total—						
16 cities	15,175,000	684	.05	48	.00	14.2
26 cities	19,619,000			73	.00	
20 cities		812				
34 cities				89		

[1] Includes nonresidents

MEASLES

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Alabama								
Birmingham	206,000	7	373	43	0.21	0		
California								
Los Angeles		6	2,503	136		2		1.5
Oakland	254,000	6	502	52	.20	0		
San Diego	106,000	7	360	65	.61	0		
San Francisco	558,000	5	1,322	238	.43	0		
Colorado								
Denver	281,000	4	1,033	133	.47	1	0.00	.8

Reported Prevalence for the Year 1925—Continued

MEASLES—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatality per 100 cases
Connecticut								
Bridgeport	-------	7	308	591	--	6	-	1.0
Hartford	160,000	7	573	261	1.65	0		
New Haven	179,000	6	587	1,166	6.51	5	0.03	.4
Waterbury	-------	7	174	57	--	3		5.3
Delaware								
Wilmington	122,000	7	198	492	4.03	0		------
District of Columbia								
Washington	498,000	4	424	794	1.59	4	.01	.5
Georgia								
Atlanta	-------	7	333	13	------	1		7.7
Illinois								
Chicago	2,995,000	7	9,025	13,175	4.40	116	.04	.9
Indiana								
Indianapolis	359,000	5	1,033	566	1.58	3	.01	.5
Iowa								
Des Moines	141,000	5	57	19	.13	1	.01	5.3
Kansas								
Kansas City	116,000	6	512	107	.92	2	.02	1.9
Kentucky								
Louisville	306,000	7	467	58	.19	0		----
Louisiana								
New Orleans	414,000	6	560	26	.06	1	.00	3.8
Maryland								
Baltimore	796,000	5	3,480	2,136	2.68	10	.01	.5
Massachusetts								
Boston	780,000	7	5,023	6,683	8.57	113	.14	1.7
Cambridge	120,000	7	911	2,282	19.02	12	.10	.5
Fall River	129,000	7	514	1,264	9.80	32	.25	2.5
Lowell	110,000	5	349	1,951	17.76	13	.12	.7
Lynn	103,000	5	314	641	6.22	9	.09	1.4
New Bedford	120,000	7	430	1,056	8.80	6	.05	.6
Springfield	142,000	5	447	203	1.43	0		------
Worcester	191,000	7	304	2,277	11.92	6	.03	.3
Michigan								
Detroit	1,246,000	5	2,455	1,653	1.33	16	.01	1.0
Flint	130,000	5	349	337	2.59	5	.04	1.5
Grand Rapids	154,000	7	330	1,611	10.46	6	.04	.4
Minnesota								
Duluth	111,000	7	175	23	.21	0	-	--
Minneapolis	425,000	6	841	311	.73	4	.01	1.3
St. Paul	246,000	7	764	266	1.08	1	.00	.4
Missouri								
Kansas City	367,000	6	1,212	141	.38	0		
St. Louis	822,000	5	1,155	343	.42	1	.00	.3
Nebraska								
Omaha	212,000	7	611	23	.11	0		
New Jersey								
Camden	129,000	7	147	1,086	8.39	32	.25	2.9
Elizabeth	-	5	477	394	-	3		.8
Jersey City	315,000	7	976	500	1.59	11	.03	2.2
Newark	453,000	5	2,733	1,970	4.35	9	.02	.5
Paterson	142,000	5	756	252	1.77	3	.02	1.2
Trenton	132,000	7	346	248	1.88	4	.03	1.6
New York								
Albany	118,000	7	603	480	4.07	0	-	--
Buffalo	538,000	4	1,099	4,038	7.51	50	.09	1.2
New York	5,873,000	5	18,433	9,483	1.61	130	.02	1.4
Rochester	317,000	5	981	1,712	5.40	6	.02	.4
Syracuse	182,000	4	701	246	1.35	0		- -
Utica	102,000	7	760	38	.37	0		-
Yonkers	114,000	7	337	1,918	16.82	33	.29	1.7
Ohio								
Akron	-------	7	939	1,099	-- --	1	-	.1
Canton	106,000	7	293	74	.70	0	--	----
Cincinnati	409,000	6	1,438	39	.10	1	.00	2.6
Cleveland	936,000	7	2,290	2,406	2.63	6	.01	.2
Columbus	280,000	5	397	123	.44	4	.01	3.3
Dayton	173,000	7	124	55	.32	2	.01	3.6
Toledo	287,000	5	1,622	2,097	7.31	1	.00	.0
Youngstown	160,000	7	536	1,265	7.91	5	.03	.4

Reported Prevalence for the Year 1925—Continued

MEASLES—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Oklahoma								
Oklahoma City		6	185	11		0		
Tulsa	124,000	3	213	26	0 21	0		
Oregon								
Portland		5	1,295	80		0		
Pennsylvania								
Erie		5	538	657		4		0 6
Philadelphia	1,979,000	4	4,0[illegible]4	7,939	4 01	76	0 04	1 0
Pittsburgh	632,000	5	2,930	7,362	11 65	83	13	1 1
Reading	113,000	7	1,001	1,692	14 97	12	11	7
Scranton	142,000	7	230	57	40	1	01	1 8
Rhode Island								
Providence	268,000	4	687	1,928	7 19	16	06	8
Tennessee								
Memphis	175,000	5	445	[1] 114	65	[1] 6	03	5 3
Nashville	136,000	7	250	342	2 51	9	07	2 6
Texas								
Dallas	194,000	5	803	34	18	1	01	2 9
El Paso	105,000	4	327	1,021	9 72	32	30	3 1
Fort Worth	155,000	6	19	3	02	0		
Houston		4	181	2		0		
San Antonio	198,000	7	110	13	07	4	02	30 8
Utah								
Salt Lake City	131,000	5	620	52	40	0		
Virginia								
Norfolk		7	331	67		0		
Richmond	186,000	7	1,424	320	1 72	3	02	9
Washington								
Seattle		7	1,572	119		0		
Spokane	109,000	7	399	7	06	1	01	14 3
Tacoma	104,000	5	143	19	.18	0		
Wisconsin								
Milwaukee	509,000	7	3,714	6,613	12 99	5	01	.1
Total								
69 cities	28,925,000		88,683	96,034	3 32	913	03	1 0
81 cities			97,519	99,260		933		9

[1] Includes nonresidents

MUMPS

City	Estimated population, July 1, 1925	Average, 1922–1924	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
Alabama							
Birmingham	206,000	[1] 59	81	0 39	0		
California							
Los Angeles		276	212		0		
Oakland	254,000	40	797	3.14	0		
San Diego	106,000	67	458	4.32	0		
San Francisco	558,000	320	1,087	1 95	2	0 00	543 5
Colorado							
Denver	281,000	360	1,884	6 70	0		
Connecticut							
Bridgeport		44	10		0		
Hartford	160,000	138	70	44	0		
New Haven	179,000		19	11	0		
Waterbury		18	16		0		
Delaware							
Wilmington	122,000	[1] 20	13	11	0		
Georgia							
Atlanta		97	50		0		

[1] Two years only.

Reported Prevalence for the Year 1925—Continued

MUMPS—Continued

City	Estimated population, July 1, 1925	Average, 1922-1924	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
Illinois:							
Chicago	2,995,000	1,987	672	0.22	1	0.00	672.0
Indiana:							
Indianapolis	359,000	[1]457	161	.45	0		
Iowa:							
Des Moines	141,000	[1]1	2	.01	1	.01	2.0
Kansas:							
Kansas City	116,000	371	361	3.11	0		
Kentucky:							
Louisville	306,000	[1]71	18	.06	0		
Maryland:							
Baltimore	796,000	1,658	1,689	2.12	1	.00	1,689.0
Massachusetts:							
Boston	780,000	1,145	283	.36	0		
Cambridge	120,000	515	40	.33	0		
Fall River	129,000	70	14	.11	0		
Lowell	110,000	71	4	.04	0		
Lynn	103,000	53	41	.40	0		
New Bedford	120,000	54	58	.48	0		
Springfield	142,000	200	129	.91	0		
Worcester	191,000	315	32	.17	0		
Michigan:							
Detroit	1,246,000	[1]601	354	.28	1	.00	354.0
Flint	130,000	290	32	.25	0		
Grand Rapids	154,000	293	32	.21	0		
Minnesota:							
Duluth	111,000	187	16	.14	0		
Minneapolis	425,000	[1]90	172	.40	0		
St. Paul	246,000	270	746	3.03	0		
Missouri:							
Kansas City	367,000	287	507	1.38	1	.00	507.0
St. Louis	822,000	506	198	.24	1	.00	198.0
Nebraska:							
Omaha	212,000	109	11	.05	0		
New Jersey:							
Camden	129,000	71	25	.19	0		
Elizabeth		372	50		0		
Newark	453,000	[1]689	282	.62	0		
Paterson	142,000	66	23	.16	0		
Trenton	132,000	8	1	.01	0		
New York:							
Albany	118,000	266	51	.43	1	.01	51.0
Buffalo	538,000	[1]242	192	.36	0		
New York	5,873,000	4,266	1,278	.22	5	.00	255.6
Rochester	317,000	322	1,187	3.74	0		
Syracuse	182,000	268	499	2.74	0		
Utica	102,000	171	14	.14	0		
Yonkers	114,000	121	43	.38	0		
Ohio:							
Akron		[1]38	53		0		
Canton	106,000	251	122	1.15	0		
Cincinnati	409,000	[1]232	154	.38	0		
Cleveland	936,000	[1]416	243	.26	0		
Columbus	280,000		59	.21	1	.00	59.0
Dayton	173,000	[1]15	24	.14	0		
Toledo	287,000	[1]15	24	.08	0		
Youngstown	160,000	21	9	.06	0		
Oklahoma:							
Oklahoma City		[2]84	12		0		
Tulsa	124,000		21	.17	0		
Oregon:							
Portland		97	318		0		
Pennsylvania:							
Erie		36	1,104		1		1,104.0
Philadelphia	1,979,000	[1]903	796	.40	0		
Pittsburgh	632,000	[1]413	442	.70	0		
Reading	113,000	292	174	1.54	0		
Scranton	142,000	46	4	.03	0		
Rhode Island:							
Providence	268,000	51	32	.12	1	.00	32.0

[1] Two years only. [2] One year only.

Reported Prevalence for the Year 1295—Continued

MUMPS—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924	1925 Cases reported	1925 Cases per 1,000 inhabitants	1925 Deaths registered	1925 Deaths per 1,000 inhabitants	1925 Cases reported for each death registered
Tennessee							
Memphis	175,000	265	111	0 65	0	----------	----------
Nashville	136,000	44	16	12	0	----------	----------
Texas							
Dallas	194,000	162	21	11	0	----------	----------
El Paso	105,000	[1] 199	206	1 96	0	----------	----------
Fort Worth	155,000	4	296	1 91	0	----------	----------
Houston	----------	[1] 1	8	----------	0	----------	----------
San Antonio	198,000	1	7	04	0	----------	----------
Utah							
Salt Lake City	131,000	772	1,049	8 01	0	----------	----------
Virginia							
Norfolk	----------	149	1,918	----------	0	----------	----------
Richmond	186,000	26	113	61	1	0 01	113 0
Washington							
Seattle	----------	396	1,570	----------	0	----------	----------
Spokane	109,000	26	50	46	0	----------	----------
Tacoma	104,000	142	67	64	0	----------	----------
Wisconsin							
Milwaukee	509,000	846	1,003	1 97	0	----------	----------
Total							
63 cities	27,115,000	22,273	18,518	68	16	00	1,157 4
66 cities	27,698,000	----------	18,617	67	18	00	1,034 3
78 cities	----------	----------	23,938	----------	18	----------	1,329 9

[1] Two years only

PELLAGRA

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama						
Birmingham	206,000	25	0 12	11	0.05	2 3
California						
Los Angeles	----------	15	----------	7	----------	2.1
San Diego	106,000	----------	----------	4	04	----------
San Francisco	558,000	6	.01	0	----------	----------
Colorado						
Denver	281,000	----------	----------	3	.01	----------
District of Columbia						
Washington	498,000	3	.01	2	00	1 5
Georgia						
Atlanta	----------	----------	----------	28	----------	----------
Illinois						
Chicago	2,995,000	----------	----------	5	.00	----------
Kansas						
Kansas City	116,000	4	03	0	----------	----------
Louisiana						
New Orleans	414,000	56	14	36	09	1.6
Maryland						
Baltimore	796,000	----------	----------	7	01	----------
Massachusetts						
Boston	780,000	10	01	3	00	3 3
Springfield	142,000	2	01	1	01	2 0
Worcester	191,000	1	01	0	----------	----------
Michigan						
Detroit	1,246,000	----------	----------	3	00	----------
Minnesota						
Minneapolis	425,000	----------	----------	1	.00	----------
Missouri						
Kansas City	367,000	4	01	3	.01	1 3
New Jersey						
Trenton	132,000	----------	----------	[1] 2	.02	----------

[1] Includes nonresidents

Reported Prevalence for the Year 1925—Continued

PELLAGRA—Continued

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
New York						
New York	5,873,000			6	0.00	
Syracuse	182,000			1	.01	
Ohio						
Cleveland	936,000			5	.01	
Oklahoma						
Oklahoma City				7		
Tulsa	124,000			3	.02	
Oregon						
Portland				1	.00	
Pennsylvania						
Philadelphia	1,970,000			13	.01	
Rhode Island						
Providence	268,000			4	.01	
Tennessee						
Memphis	175,000	[1] 19	0.11	[1] 17	.10	1.1
Nashville	136,000	14	.10	9	.07	1.6
Texas:						
Dallas	194,000			20	.10	
El Paso	105,000			1	.04	
Houston				40		
San Antonio	198,000			16	.08	
Virginia:						
Norfolk				4		
Richmond	186,000			6	.03	
Washington						
Seattle				1		
Total:						
28 cities	19,609,000			185	.01	
33 cities				273		

PNEUMONIA (ALL FORMS)

Alabama						
Birmingham	206,000	692	3.36	439	2.13	1.6
California						
Los Angeles		1,951		821		2.4
Oakland	254,000	[2] 120	[2] .47	182	.72	
San Diego	106,000	222	2.09	93	.88	2.4
San Francisco	558,000	[2] 435	[2] .78	685	1.23	
Colorado						
Denver	281,000			492	1.75	
Connecticut						
Bridgeport		367		145		2.5
Hartford	160,000	453	2.83	172	1.07	2.6
New Haven	179,000	251	1.40	210	1.17	1.2
Waterbury		210		135		1.6
Delaware:						
Wilmington	122,000			154	1.26	
District of Columbia						
Washington	498,000	1,266	2.54	644	1.29	2.0
Georgia						
Atlanta		688		554		1.2
Illinois						
Chicago	2,995,000	9,167	3.06	3,075	1.03	3.0
Indiana:						
Indianapolis	359,000			517	1.44	
Iowa						
Des Moines	141,000			110	.78	
Kansas						
Kansas City	116,000	293	2.53	220	1.90	1.3
Kentucky						
Louisville	306,000			423	1.38	
Louisiana						
New Orleans	414,000	660	1.59	505	1.22	1.3
Maryland:						
Baltimore	796,000	2,286	2.87	1,537	1.93	1.5
Massachusetts						
Boston	780,000	[2] 1,807	[2] 2.32	1,181	1.51	
Cambridge	120,000	[2] 269	[2] 2.24	78	.65	
Fall River	129,000	[2] 207	[2] 1.60	147	1.14	
Lowell	110,000	[2] 98	[2] .89	193	1.75	
Lynn	103,000	[2] 126	[2] 1.22	56	.54	
New Bedford	120,000	[2] 217	[2] 1.81	169	1.41	
Springfield	142,000	[2] 189	[2] 1.33	73	.51	
Worcester	191,000	[2] 305	[2] 1.60	125	.65	

[1] Includes nonresidents. [2] Lobar pneumonia only.

Reported Prevalence for the Year 1925—Continued

PNEUMONIA (ALL FORMS)—Continued

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Michigan						
Detroit	1,246,000	3,632	2.91	1,568	1.26	2.3
Flint	130,000			98	.75	
Grand Rapids	154,000	232	1.51	133	.86	1.7
Minnesota						
Duluth	111,000			117	1.05	
Minneapolis	425,000			385	.91	
St Paul	246,000			249	1.01	
Missouri						
Kansas City	367,000	781	2.13	507	1.38	1.5
St Louis	822,000			1,355	1.65	
Nebraska						
Omaha	212,000			406	1.92	
New Jersey						
Camden	129,000	206	1.60	195	1.51	1.1
Elizabeth				108		
Jersey City	315,000			438	1.39	
Newark	453,000	2,531	5.59	584	1.29	4.3
Paterson	142,000	194	1.37	176	1.24	1.1
Trenton	132,000	235	1.78	187	1.42	1.3
New York						
Albany	118,000	586	4.97	146	1.24	4.0
Buffalo	538,000	1,498	2.78	690	1.28	2.2
New York	5,873,000	15,651	2.66	8,397	1.43	1.9
Rochester	317,000	1,077	3.40	258	.81	4.2
Syracuse	182,000	687	3.77	221	1.21	3.1
Utica	102,000	227	2.23	99	.97	2.3
Yonkers	114,000			126	1.11	
Ohio						
Akron		258		249		1.0
Canton	106,000	175	1.65	169	1.59	1.0
Cincinnati	409,000			573	1.40	
Cleveland	936,000	2,416	2.58	1,063	1.14	2.3
Columbus	280,000			290	1.04	
Dayton	173,000			175	1.01	
Toledo	287,000			245	.85	
Youngstown	160,000			175	1.09	
Oklahoma						
Oklahoma City		189		125		1.5
Tulsa	124,000			126	1.02	
Oregon						
Portland				301		
Pennsylvania						
Erie				125		
Philadelphia	1,979,000			2,651	1.34	
Pittsburgh	632,000	4,174	6.60	1,688	2.67	2.5
Reading	113,000			115	1.02	
Scranton	142,000			292	2.06	
Rhode Island						
Providence	268,000			324	1.21	
Tennessee						
Memphis	175,000			[1] 345	1.97	
Nashville	136,000			181	1.33	
Texas						
Dallas	194,000			272	1.40	
El Paso	105,000			96	.91	
Houston				259		
San Antonio	198,000			275	1.39	
Utah						
Salt Lake City	131,000			140	1.07	
Virginia						
Norfolk				155		
Richmond	186,000			238	1.28	
Washington						
Seattle				177		
Spokane	109,000	173	1.59	122	1.12	1.4
Tacoma	104,000			99	.95	
Wisconsin						
Milwaukee	509,000			717	1.41	
Total						
68 cities	28,770,000			38,186	1.33	
80 cities				41,340		

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

POLIOMYELITIS (INFANTILE PARALYSIS)

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Alabama								
Birmingham	206,000	7	4	21	0.10	5	0.02	23.8
California								
Los Angeles		7	17	160		24		15.0
Oakland	251,000	6	3	49	.19	4	.02	8.2
San Diego	106,000	7	5	15	.14	6	.06	40.0
San Francisco	558,000	7	4	66	.12	11	.02	16.7
Colorado:								
Denver	281,000	5	3	7	.02	2	.01	28.6
Connecticut								
Bridgeport		6	6	4		1		25.0
Hartford	160,000	7	4	7	.04	5	.03	71.4
New Haven	179,000	7	6	3	.02	0		
District of Columbia:								
Washington	498,000	7	11	22	.04	4	.01	18.2
Georgia								
Atlanta		6	1	3		1		33.3
Illinois								
Chicago	2,995,000	7	86	66	.02	7	.00	10.6
Indiana								
Indianapolis	359,000	7	3	10	.03	4	.01	40.0
Iowa								
Des Moines	141,000	3	3	7	.05	0		
Kansas								
Kansas City	116,000	6	1	9	.08	6	.05	66.7
Kentucky:								
Louisville	306,000	6	1	2	.01	0		
Louisiana:								
New Orleans	414,000	7	5	13	.03	2	.00	15.4
Maryland:								
Baltimore	796,000	4	23	28	.04	9	.01	32.1
Massachusetts:								
Boston	780,000	6	43	46	.06	9	.01	19.6
Cambridge	120,000	7	4	5	.04	0		
Fall River	129,000	7	4	6	.05	1	.01	16.7
Lowell	110,000	7	8	6	.05	2	.02	33.3
Lynn	103,000	6	5	1	.01	0		
New Bedford	120,000	7	3	1	.01	0		
Springfield	142,000	7	3	3	.02	0		
Worcester	191,000	6	5	3	.02	1	.01	33.3
Michigan:								
Detroit	1,246,000	7	17	34	.03	8	.01	23.5
Flint	130,000	6	10	3	.02	1	.01	33.3
Grand Rapids	154,000	7	4	1	.01	1	.01	100.0
Minnesota:								
Duluth	111,000	7	1	20	.18	2	.02	10.0
Minneapolis	425,000	7	7	87	.20	10	.02	11.5
St. Paul	246,000	7	6	28	.11	2	.01	7.1
Missouri:								
Kansas City	367,000	7	3	54	.15	20	.05	37.0
St. Louis	822,000	5	16	9	.01	3	.00	33.3
Nebraska:								
Omaha	212,000	6	3	71	.33	19	.09	26.8
New Jersey:								
Jersey City	315,000	7	3	18	.06	4	.01	22.2
Newark	453,000	7	19	28	.06	8	.02	28.6
Paterson	142,000	7	1	6	.04	0		
Trenton	132,000	7	2	4	.03	1	.01	25.0
New York:								
Albany	118,000	7	2	5	.04	2	.02	40.0
Buffalo	538,000	7	7	40	.07	11	.02	27.5
New York	5,873,000	5	224	307	.05	102	.02	33.2
Rochester	317,000	5	5	28	.09	8	.03	28.6
Syracuse	182,000	7	8	5	.03	2	.01	40.0
Utica	102,000	7	2	5	.05	2	.02	40.0
Yonkers	114,000	7	3	6	.05	1	.01	16.7
Ohio:								
Akron		6	4	8		7		87.5
Cincinnati	409,000	7	5	7	.02	4	.01	57.1
Cleveland	930,000	7	13	88	.09	20	.02	22.7
Columbus	280,000	5	4	3	.01	0		
Dayton	173,000	7	2	1	.01	1	.01	100.0

Reported Prevalence for the Year 1925—Continued

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Ohio—Continued								
Toledo	287,000	7	4	5	0 02	1	0 00	20 0
Youngstown	160,000	7	2	6	04	4	02	66 7
Oklahoma								
Oklahoma City		5	0	9		0		
Oregon								
Portland		7	2	10		0		
Pennsylvania								
Erie		7	2	4		1		25 0
Philadelphia	1,979,000	7	21	16	01	5	00	31 2
Pittsburgh	632,000	7	7	40	06	8	01	20 0
Reading	113,000	7	1	1	01	0		
Rhode Island								
Providence	268,000	7	9	20	07	3	01	15 0
Tennessee								
Memphis	175,000	7	1	[1] 6	03	[1] 1	.01	16.7
Nashville	136,000	5	1	4	03	2	01	50 0
Texas								
Dallas	194,000	7	2	10	05	3	02	30 0
El Paso	105,000	3	0	2	02	2	02	100 0
Houston		7	1	3		0		
San Antonio	198,000	6	1	6	03	2	01	33 3
Utah								
Salt Lake City	131,000	5	2	4	03	2	02	50 0
Virginia								
Norfolk		7	2	2		0		
Richmond	186,000	7	5	6	03	1	.01	16.7
Washington								
Seattle		7	2	23		5		21 7
Spokane	109,000	7	1	5	05	5	05	100 0
Tacoma	104,000	7	2	28	.27	3	03	10.7
Wisconsin								
Milwaukee	509,000	5	14	14	03	3	01	21 4
Total								
63 cities	28,147,000		677	1,427	05	355	01	24 9
73 cities			714	1,653		394		23 8

[1] One nonresident.

RABIES IN MAN

City	Deaths registered, 1925	City	Deaths registered, 1925
California		Oklahoma	
Los Angeles	[1] 1	Tulsa	3
Louisiana		Pennsylvania	
New Orleans	1	Philadelphia	2
Maryland		Pittsburgh	2
Baltimore	3	Tennessee	
Massachusetts		Memphis	[1] 2
Springfield	1	Nashville	2
Michigan		Texas	
Detroit	1	El Paso	1
Missouri		Fort Worth	2
Kansas City	2	Houston	2
New York		Washington	
New York	1	Seattle	2
Ohio			
Cincinnati	4		
Cleveland	1		

[1] Nonresidents.

Reported Prevalence for the Year 1925—Continued

RABIES IN ANIMALS

City	Cases reported, 1925
Alabama:	
Birmingham	138
California	
Los Angeles	173
San Diego	37
District of Columbia:	
Washington	80
Illinois	
Chicago	21
Iowa	
Des Moines	1
Kentucky	
Louisville	7
Maryland:	
Baltimore	20
Massachusetts	
Boston	14
Cambridge	3
Michigan	
Detroit	93
Grand Rapids	43
Missouri	
Kansas City	115
St Louis	14

City	Cases reported, 1925
New Jersey	
Camden	28
Elizabeth	11
Jersey City	11
New York	
Yonkers	45
Ohio	
Cincinnati	63
Cleveland	214
Columbus	123
Toledo	1
Tennessee	
Memphis	156
Texas	
Dallas	20
Houston	129
San Antonio	7
Virginia	
Richmond	5

SCARLET FEVER

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Alabama.								
Birmingham	206,000	7	182	503	2 44	5	0 02	1 0
California:								
Los Angeles		7	853	1,214		11		.9
Oakland	254,000	7	317	174	69	1	00	6
San Diego	106,000	7	111	173	1 63	3	03	1.7
San Francisco	558,000	7	569	528	95	7	01	1.3
Colorado:								
Denver	281,000	7	518	412	1 47	6	02	1.5
Connecticut:								
Bridgeport		7	365	514		5		1.0
Hartford	160,000	7	240	238	1 49	1	.01	.4
New Haven	179,000	7	288	510	2.85	2	.01	.4
Waterbury		7	309	182		3		1.6
Delaware.								
Wilmington	122,000	7	234	106	87	1	.01	.9
District of Columbia:								
Washington	498,000	7	853	1,011	2 03	5	.01	.5
Georgia.								
Atlanta		7	220	100		1		1.0
Illinois:								
Chicago	2,995,000	7	4,550	7,668	2.56	128	.04	1.7
Indiana:								
Indianapolis	359,000	4	297	266	74	2	.01	.8
Iowa								
Des Moines	141,000	4	293	177	1 26	1	.01	.6
Kansas:								
Kansas City	116,000	7	174	776	6.69	4	03	.5
Kentucky.								
Louisville	306,000	7	153	390	1 27	1	.00	.3
Louisiana.								
New Orleans	414,000	7	221	433	1.05	7	.02	1.6
Maryland.								
Baltimore	796,000	5	1,166	1,122	1.41	5	.01	.4

Reported Prevalence for the Year 1925—Continued

SCARLET FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Massachusetts								
Boston	780,000	5	1,794	2,873	3.68	47	0.06	1.6
Cambridge	120,000	7	278	167	1.39	1	.01	.6
Fall River	129,000	7	141	130	1.01	1	.01	.8
Lowell	110,000	7	135	265	2.41	3	.03	1.1
Lynn	103,000	6	197	230	2.23	1	.01	.4
New Bedford	120,000	7	161	190	1.58	4	.03	2.1
Springfield	142,000	5	233	647	4.56	5	.04	.8
Worcester	191,000	7	399	448	2.35	5	.03	1.1
Michigan								
Detroit	1,246,000	7	3,125	4,104	3.29	53	.04	1.3
Flint	130,000	6	434	260	2.00	1	.01	.4
Grand Rapids	154,000	7	297	1,277	8.29	7	.05	.5
Minnesota								
Duluth	111,000	7	216	812	7.32	4	.04	.5
Minneapolis	425,000	5	1,200	2,759	6.49	23	.05	.8
St Paul	246,000	7	1,137	1,288	5.24	31	.13	2.4
Missouri								
Kansas City	367,000	7	434	2,160	5.89	32	.09	1.5
St Louis	822,000	7	1,175	3,419	4.16	43	.05	1.3
Nebraska								
Omaha	212,000	7	258	195	.92	0	-------	-------
New Jersey								
Camden	129,000	7	152	591	4.58	3	.02	.5
Elizabeth	-------	7	271	255	-------	0	-------	-------
Jersey City	315,000	7	420	318	1.01	2	.01	.6
Newark	453,000	7	806	1,128	2.49	5	.01	.4
Paterson	142,000	7	180	268	1.89	0	-------	-------
Trenton	132,000	7	246	120	.91	0	-------	-------
New York								
Albany	118,000	7	144	331	2.81	4	.03	1.2
Buffalo	538,000	7	885	853	1.59	14	.03	1.6
New York	5,873,000	5	6,445	8,810	1.51	75	.01	.8
Rochester	317,000	7	500	1,342	4.23	9	.03	.7
Syracuse	182,000	7	629	129	.71	0	-------	-------
Yonkers	114,000	7	228	344	3.02	1	.01	.3
Ohio								
Akron	-------	7	395	900	-------	30	-------	3.3
Canton	106,000	7	122	203	1.92	1	.01	.5
Cincinnati	409,000	7	596	678	1.66	9	.02	1.3
Cleveland	936,000	5	1,284	1,004	1.07	15	.02	1.5
Columbus	280,000	7	424	556	1.99	6	.02	1.1
Dayton	173,000	7	236	602	3.48	2	.01	.3
Toledo	287,000	7	739	609	2.12	10	.03	1.6
Youngstown	160,000	7	350	521	3.26	9	.06	1.7
Oklahoma								
Oklahoma City	-------	6	145	98	-------	3	-------	3.1
Tulsa	124,000	3	70	76	.61	1	.01	1.3
Oregon								
Portland	-------	7	255	435	-------	3	-------	.7
Pennsylvania								
Erie	-------	7	186	470	-------	8	-------	1.7
Philadelphia	1,979,000	7	3,353	4,954	2.50	75	.04	1.5
Pittsburgh	632,000	7	1,556	2,701	4.27	32	.05	1.2
Reading	113,000	7	74	341	3.02	6	.05	1.8
Scranton	142,000	7	146	129	.91	0	-------	-------
Rhode Island								
Providence	268,000	7	533	353	1.32	6	.02	1.7
Tennessee								
Memphis	175,000	7	190	[1] 235	1.34	3	.02	1.3
Nashville	136,000	7	112	239	1.76	2	.01	.8
Texas								
Dallas	194,000	7	133	210	1.08	4	.02	1.9
El Paso	105,000	4	83	90	.86	1	.01	1.1
Fort Worth	155,000	7	64	74	.48	3	.02	4.1
Houston	-------	7	50	81	-------	0	-------	-------
San Antonio	108,000	7	32	41	.21	2	.01	4.9
Utah								
Salt Lake City	131,000	7	105	189	1.44	1	.01	.5
Virginia								
Norfolk	-------	7	82	47	-------	0	-------	-------
Richmond	186,000	7	231	263	1.41	2	.01	.8

[1] Includes nonresidents

Reported Prevalence for the Year—Continued

SCARLET FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Washington:								
Seattle		7	454	528		3		0.6
Spokane	109,000	7	290	292	2.68	5	0.05	1.7
Tacoma	104,000	7	126	95	.91	0		
Wisconsin:								
Milwaukee	509,000	7	1,287	611	1.20	7	.01	1.1
Total								
68 cities	28,823,000		44,641	65,011	2.26	735	.03	1.2
80 cities			18,226	69,865		822		1.2

SEPTIC SORE THROAT

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama:						
Birmingham	206,000	1	0.00	0		
California:						
San Diego	106,000			3	0.03	
Colorado:						
Denver	281,000			6	.02	
Connecticut:						
Bridgeport		6		2		3.0
Hartford	160,000	6	.04	3	.02	2.0
New Haven	179,000	3	.02	0		
Waterbury		1		1		1.0
Georgia:						
Atlanta		43		0		
Illinois:						
Chicago	2,995,000	58	.02	55	.02	1.1
Louisiana:						
New Orleans	414,000	1	.00	0		
Maryland:						
Baltimore	796,000	29	.04	5	.01	5.8
Massachusetts:						
Boston	780,000	68	.09	14	.02	4.9
Cambridge	120,000	5	.04	0		
Fall River	129,000	3	.02	0		
Lowell	110,000	1	.01	1	.01	1.0
New Bedford	120,000	1	.01	0		
Worcester	191,000	2	.01	0		
Michigan:						
Detroit	1,246,000	3	.00	0		
Minnesota:						
Minneapolis	425,000			11	.03	
New York:						
Albany	118,000	11	.09	3	.03	3.7
New York	5,873,000			77	.01	
Rochester	317,000			10	.03	
Yonkers	114,000			1	.01	
Ohio:						
Akron				5		
Oklahoma:						
Tulsa	124,000			1	.01	
Pennsylvania:						
Pittsburgh	632,000			33	.05	
Rhode Island:						
Providence	268,000	3	.01	1	.00	3.0
Tennessee:						
Memphis	175,000	1	.01	0		
Texas:						
Dallas	194,000	2	.01	0		
El Paso	105,000	32	.30	4	.04	8.0
Houston				3		
Washington:						
Seattle				13		
Total:						
26 cities	16,178,000			228	.01	
32 cities				252		

Reported Prevalence for the Year 1925—Continued

SMALLPOX

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Alabama								
Birmingham	206,000	7	266	1,675	8.13	6	0.03	0.4
California								
Los Angeles	--------	5	169	1,278	--------	33	--------	2.6
Oakland	254,000	5	57	498	1.96	0	--------	--------
San Diego	106,000	7	37	439	4.14	2	.02	.5
San Francisco	558,000	7	125	205	.37	15	.03	7.3
Colorado								
Denver	281,000	2	[1] 25	3	.01	0	--------	--------
Connecticut								
Bridgeport	--------	6	3	0	--------	0	--------	--------
Hartford	160,000	7	1	0	--------	0	--------	--------
New Haven	179,000	7	1	0	--------	0	--------	--------
Waterbury	--------	7	1	0	--------	0	--------	--------
Delaware								
Wilmington	122,000	7	0	3	.02	0	--------	--------
District of Columbia								
Washington	498,000	7	67	59	.12	20	.04	33.9
Georgia:								
Atlanta	--------	3	139	33	--------	0	--------	--------
Illinois								
Chicago	2,995,000	7	154	70	.02	12	.00	17.1
Indiana.								
Indianapolis	359,000	5	215	545	1.52	0	--------	--------
Iowa								
Des Moines	141,000	4	137	61	.43	0	--------	--------
Kansas								
Kansas City	116,000	5	46	8	.07	0	--------	--------
Kentucky								
Louisville	306,000	7	34	64	.21	0	--------	--------
Louisiana								
New Orleans	414,000	4	30	26	.06	0	--------	--------
Maryland								
Baltimore	796,000	7	18	14	.02	0	--------	--------
Massachusetts								
Boston	780,000	7	5	0	--------	0	--------	--------
Cambridge	120,000	7	0	0	--------	0	--------	--------
Fall River	129,000	7	0	0	--------	0	--------	--------
Lowell	110,000	7	1	0	--------	0	--------	--------
Lynn	103,000	6	0	0	--------	0	--------	--------
New Bedford	120,000	7	0	0	--------	0	--------	--------
Springfield	142,000	7	1	0	--------	0	--------	--------
Worcester	191,000	7	0	0	--------	0	--------	--------
Michigan								
Detroit	1,246,000	5	467	66	.05	12	.01	18.2
Flint	130,000	4	34	56	.43	0	--------	--------
Grand Rapids	154,000	7	45	30	.19	1	.01	3.3
Minnesota								
Duluth	111,000	7	228	8	.07	0	--------	--------
Minneapolis	425,000	5	507	416	.98	144	.34	34.6
St. Paul	246,000	7	505	81	.33	18	.07	22.2
Missouri,								
Kansas City	367,000	4	105	33	.09	0	--------	--------
St. Louis	822,000	7	118	209	.25	0	--------	--------
Nebraska:								
Omaha	212,000	3	75	559	2.64	0	--------	--------
New Jersey								
Camden	129,000	7	2	97	.75	44	.34	45.4
Elizabeth	--------	7	2	0	--------	0	--------	--------
Jersey City	315,000	7	1	22	.07	0	--------	--------
Newark	453,000	7	2	2	.00	0	--------	--------
Paterson	142,000	7	0	0	--------	0	--------	--------
Trenton	132,000	7	3	4	.03	0	--------	--------
New York								
Albany	118,000	7	1	0	--------	0	--------	--------
Buffalo	538,000	7	21	20	.04	0	--------	--------
New York	5,873,000	7	18	12	.00	0	--------	--------
Rochester	317,000	7	3	2	.01	0	--------	--------
Syracuse	182,000	7	1	0	--------	0	--------	--------
Utica	102,000	7	1	1	.01	0	--------	--------
Yonkers	114,000	7	0	1	.01	1	.01	100.0

[1] It was impracticable to make an estimated expectancy for Denver. For the years 1918–1922 (5 years) the mean was 811, 45 cases were reported in 1923 and 6 in 1924, 25 is the mean of the last two years.

Reported Prevalence for the Year 1925—Continued

SMALLPOX—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Ohio								
Akron		5	70	18		1		5.6
Canton	106,000	5	33	9	0.08	0		
Cincinnati	409,000	5	83	51	12	0		
Cleveland	936,000	7	99	19	02	5	0.01	26.3
Columbus	280,000	7	78	292	1.04	0		
Dayton	173,000	7	67	29	17	0		
Toledo	287,000	7	210	10	03	0		
Youngstown	160,000	7	115	210	1.31	9	.06	4.3
Oklahoma								
Oklahoma City		4	93	2		0		
Tulsa	124,000	3	29	13	10	0		
Oregon								
Portland		5	464	303		0		
Pennsylvania								
Erie		7	2	7		2		28.6
Philadelphia	1,979,000	6	27	184	09	24	01	13.0
Pittsburgh	632,000	7	19	0		0		
Reading	113,000	7	1	0		0		
Scranton	142,000	7	1	0		0		
Rhode Island								
Providence	268,000	7	1	4	.01	0		
Tennessee:								
Memphis	175,000	7	51	[2] 163	.93	1	.01	.6
Nashville	136,000	5	31	172	1.26	1	01	.6
Texas								
Dallas	194,000	4	57	48	.25	0		
El Paso	105,000	4	5	0		0		
Fort Worth	155,000	5	64	17	11	1	01	5.9
Houston		7	43	172		0		
San Antonio	198,000	7	10	6	03	0		
Utah.								
Salt Lake City	131,000	4	91	1	.01	0		
Virginia.								
Norfolk		5	11	0		0		
Richmond	186,000	7	8	6	03	0		
Washington.								
Seattle		4	176	495		0		
Spokane	109,000	4	391	59	54	0		
Tacoma	104,000	7	197	272	2.62	0		
Wisconsin:								
Milwaukee	509,000	4	103	385	.76	87	17	22.6
Total:								
69 cities	28,925,000		5,128	7,239	25	403	01	5.6
81 cities			6,301	9,547		439		4.6

TUBERCULOSIS (ALL FORMS)

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama:						
Birmingham	206,000	571	2.77	289	1.40	2.0
California						
Los Angeles		3,789		1,168		3.2
Oakland	254,000	294	1.16	161	63	1.8
San Diego	106,000	296	2.70	180	1.70	1.6
San Francisco	558,000	1,159	2.08	645	1.16	1.8
Colorado						
Denver	281,000			525	1.87	
Connecticut:						
Bridgeport		170		85		2.0
Hartford	160,000	264	1.65	75	.47	3.5
New Haven	179,000	266	1.49	102	.57	2.6
Waterbury		127		46		2.8

[2] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (ALL FORMS)—Continued

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Delaware						
Wilmington	122,000			74	0.61	
District of Columbia						
Washington	498,000	1,238	2.49	544	1.09	2.3
Georgia						
Atlanta		687		266		2.6
Illinois						
Chicago	2,995,000	7,709	2.57	2,489	.83	3.1
Indiana						
Indianapolis	359,000			558	1.55	
Iowa						
Des Moines	141,000			57	.40	
Kansas						
Kansas City	116,000	341	2.94	148	1.28	2.3
Kentucky						
Louisville	306,000	677	2.21	267	.87	2.5
Louisiana						
New Orleans	414,000	1,128	2.72	762	1.84	1.5
Maryland						
Baltimore	796,000	1,551	1.95	962	1.21	1.6
Massachusetts						
Boston	780,000	2,183	2.80	786	1.01	2.8
Cambridge	120,000	201	1.67	97	.81	2.1
Fall River	129,000	383	2.97	122	.95	3.1
Lowell	110,000	151	1.37	88	.80	1.7
Lynn	103,000	173	1.68	30	.29	5.8
New Bedford	120,000	298	2.48	95	.79	3.1
Springfield	142,000	197	1.39	72	.51	2.7
Worcester	191,000	246	1.29	136	.71	1.8
Michigan						
Detroit	1,246,000	2,533	2.03	1,127	.90	2.2
Flint	130,000			45	.35	
Grand Rapids	154,000	207	1.34	64	.42	3.2
Minnesota						
Duluth	111,000			49	.44	
Minneapolis	425,000	1,270	2.99	210	.49	6.0
St. Paul	246,000	402	1.63	205	.83	2.0
Missouri:						
Kansas City	367,000	707	1.93	379	1.03	1.9
St. Louis	822,000	1,554	1.89	615	.75	2.5
Nebraska:						
Omaha	212,000			139	.66	
New Jersey:						
Camden	129,000	178	1.38	72	.56	2.5
Elizabeth		153		77		2.0
Jersey City	315,000	509	1.62	252	.80	2.0
Newark	453,000	872	1.92	378	.83	2.3
Paterson	142,000	247	1.74	132	.93	1.9
Trenton	132,000	292	2.21	180	1.36	1.6
New York						
Albany	118,000	283	2.40	135	1.14	2
Buffalo	538,000	985	1.83	467	.87	2.1
New York	5,873,000	11,045	1.88	5,475	.93	2.0
Rochester	317,000	502	1.58	176	.56	2.9
Syracuse	182,000	343	1.88	84	.46	4.1
Utica	102,000	110	1.08	53	.52	2.1
Yonkers	114,000	178	1.56	84	.74	2.1
Ohio						
Akron		501		99		5.1
Canton	106,000	134	1.26	54	.51	2.5
Cincinnati	409,000	928	2.27	473	1.16	2.0
Cleveland	936,000	1,961	2.10	813	.87	2.4
Columbus	280,000	351	1.25	255	.91	1.4
Dayton	173,000			124	.72	
Toledo	287,000	276	.96	268	.93	1.0
Youngstown	160,000			100	.62	
Oklahoma						
Oklahoma City		136		67		2.0
Tulsa	124,000			67	.54	
Oregon						
Portland		431		184		2.3
Pennsylvania:						
Erie		267		82		3.3
Philadelphia	1,979,000	3,200	1.62	2,002	1.01	1.6
Pittsburgh	632,000	725	1.15	521	.82	1.4
Reading	113,000			66	.58	
Scranton	142,000	114	.80	63	.44	1.8

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (ALL FORMS)—Continued

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Rhode Island						
Providence	268,000			165	0.62	
Tennessee						
Memphis	175,000	[1] 701	4.01	[1] 282	1.61	2.5
Nashville	136,000	384	2.82	186	1.37	2.1
Texas						
Dallas	194,000			137	.71	
El Paso	105,000			439	4.18	
Fort Worth	155,000	109	.70	103	.66	1.1
San Antonio	198,000			428	2.16	
Utah						
Salt Lake City	131,000	85	.65	70	.53	1.2
Virginia						
Norfolk		183		130		1.4
Richmond	186,000	481	2.59	182	.98	2.6
Washington						
Seattle				267		
Spokane	109,000	93	.85	48	.44	1.9
Tacoma	104,000	67	.64	56	.54	1.2
Wisconsin						
Milwaukee	509,000	789	1.55	308	.61	2.6
Total						
54 cities	26,234,000	51,941	1.98	23,759	.91	2.2
69 cities	28,925,000			26,795	.93	
63 cities		58,385				
79 cities				29,266		

TUBERCULOSIS (PULMONARY)

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama						
Birmingham	206,000	520	2.52	235	1.14	2.2
California						
Los Angeles		3,786		974		3.9
Oakland	254,000			142	.56	
San Diego	106,000			171	1.61	
San Francisco	558,000	1,058	1.90	549	.98	1.9
Colorado						
Denver	281,000			482	1.72	
Connecticut						
Bridgeport		170		85		2.0
Hartford	160,000	239	1.49	66	.41	3.6
New Haven	179,000	225	1.26	95	.53	2.4
Waterbury		117		40		2.9
District of Columbia						
Washington	498,000	1,188	2.39	479	.96	2.5
Illinois:						
Chicago	2,995,000			2,215	.74	
Indiana						
Indianapolis	359,000			249	.69	
Iowa:						
Des Moines	141,000			46	.33	
Louisiana						
New Orleans	414,000	1,128	2.72			
Maryland						
Baltimore	796,000	1,471	1.85	833	1.05	1.8
Massachusetts						
Boston	780,000	1,841	2.36	669	.86	2.8
Cambridge	120,000	169	1.41	90	.75	1.9
Fall River	129,000	237	1.84	97	.75	2.4
Lowell	110,000	117	1.06	70	.64	1.7
Lynn	103,000	153	1.49	23	.22	6.7
New Bedford	120,000	203	1.69	84	.70	2.4
Springfield	142,000	126	.89	60	.42	2.1
Worcester	191,000	205	1.07	111	.58	1.8
Michigan:						
Detroit	1,246,000	2,338	1.88	940	.75	2.5
Flint	130,000			35	.27	
Grand Rapids	154,000	187	1.21	52	.34	3.6

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (PULMONARY)—Continued

City	Estimated population, July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Minnesota						
Duluth	111,000			43	0.39	
Minneapolis	425,000	1,029	2.42	165	.39	6.2
St. Paul	246,000	372	1.51	166	.67	2.2
Missouri						
Kansas City	367,000			323	.88	
St. Louis	822,000	1,554	1.89	563	.68	2.8
New Jersey						
Camden	129,000	174	1.35	64	.50	2.7
Elizabeth				63		
Jersey City	315,000			214	.68	
Newark	453,000	813	1.79	335	.74	2.4
Trenton	132,000	262	1.98	156	1.18	1.7
New York						
Albany	118,000	273	2.31	122	1.03	2.2
Buffalo	538,000	830	1.54	404	.75	2.1
New York	5,873,000	10,955	1.87	4,776	.81	2.3
Rochester	317,000			146	.46	
Syracuse	182,000	296	1.63	70	.38	4.2
Yonkers	114,000	172	1.51	82	.72	2.1
Ohio						
Akron		118		67		1.8
Canton	106,000			41	.39	
Cincinnati	409,000	810	1.98	391	.96	2.1
Cleveland	936,000	1,834	1.96	699	.75	2.6
Columbus	280,000	351	1.25	211	.75	1.7
Dayton	173,000	119	.69	103	.60	1.2
Toledo	287,000			245	.85	
Youngstown	160,000			84	.52	
Oregon						
Portland				136		
Pennsylvania						
Erie		254		69		3.7
Philadelphia	1,979,000	3,099	1.57	1,781	.90	1.7
Pittsburgh	632,000	725	1.15	429	.68	1.7
Reading	113,000			64	.57	
Scranton	142,000	114	.80	53	.37	2.2
Rhode Island						
Providence	268,000			122	.46	
Tennessee						
Memphis	175,000	[1] 643	3.67	[1] 231	1.32	2.8
Nashville	136,000			159	1.17	
Texas						
Dallas	194,000			122	.63	
El Paso	105,000			412	3.92	
San Antonio	198,000			415	2.10	
Utah						
Salt Lake City	131,000	85	.65	62	.47	1.4
Virginia						
Richmond	186,000			154	.83	
Washington						
Seattle				190		
Spokane	109,000	83	.76	38	.35	2.2
Tacoma	104,000			34	.33	
Wisconsin						
Milwaukee	509,000	789	1.55	247	.49	3.2
Total						
38 cities	19,999,000	35,659	1.78	15,601	.78	2.3
60 cities	27,232,000			21,519	.79	
44 cities		41,232				
68 cities				23,143		

[1] Includes nonresidents

Reported Prevalence for the Year 1925—Continued

TYPHOID FEVER

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Alabama								
Birmingham	206, 000	7	162	[1] 136	0 66	[1] 19	0 09	14 0
California								
Los Angeles	--------	7	167	63	--------	16	--------	25 4
Oakland	254, 000	7	37	30	12	3	.01	10 0
San Diego	106, 000	7	9	24	.23	1	01	4.2
San Francisco	558, 000	7	71	92	16	12	.02	13 0
Colorado								
Denver	281, 000	7	75	40	.14	14	.05	35.0
Connecticut								
Bridgeport	--------	7	19	16	--------	1	--------	6 2
Hartford	160, 000	7	25	27	17	3	.02	11 1
New Haven	179, 000	7	74	38	.21	3	.02	7 9
Waterbury	--------	7	14	22	--------	4	--------	18.2
Delaware								
Wilmington	122, 000	7	35	33	.24	4	.03	12.1
District of Columbia								
Washington	498, 000	7	159	126	.25	25	.05	19.8
Georgia								
Atlanta	--------	7	89	153	--------	46	--------	30.1
Illinois								
Chicago	2, 995, 000	7	234	237	08	44	01	18 6
Indiana								
Indianapolis	359, 000	7	56	46	.13	13	04	28.3
Iowa								
Des Moines	141, 000	--------	--------	[2]	--------	7	.05	--------
Kansas								
Kansas City	116, 000	6	41	26	22	9	.08	34.6
Kentucky								
Louisville	306, 000	7	135	120	.39	15	.05	12.5
Louisiana								
New Orleans	414, 000	7	171	338	.82	39	.09	11.5
Maryland								
Baltimore	796, 000	7	269	174	22	29	.04	16.7
Massachusetts								
Boston	780, 000	7	120	151	19	27	.03	17.9
Cambridge	120, 000	7	16	16	.13	2	.02	12.5
Fall River	129, 000	7	68	36	28	2	.02	5.6
Lowell	110, 000	7	27	10	09	0	--------	--------
Lynn	103, 000	6	20	12	.12	1	.01	8.3
New Bedford	120, 000	7	18	10	.08	1	.01	10 0
Springfield	142, 000	7	13	11	.08	2	.01	18.2
Worcester	191, 000	7	25	17	.09	4	.02	23.5
Michigan:								
Detroit	1, 246, 000	7	190	148	.12	33	.03	22.3
Flint	130, 000	6	45	14	.11	2	.02	14.3
Grand Rapids	154, 000	7	31	[1] 17	.11	[1] 2	.01	11.8
Minnesota:								
Duluth	111, 000	7	24	[1] 12	.11	1	.01	8.3
Minneapolis	425, 000	7	56	60	.14	13	.03	21.7
St Paul	246, 000	7	47	48	.20	7	.03	14.6
Missouri:								
Kansas City	367, 000	7	68	72	20	7	.02	9 7
St. Louis	822, 000	7	178	201	.24	32	.04	15.9
Nebraska								
Omaha	212, 000	6	27	15	.07	4	.02	26 7
New Jersey								
Camden	129, 000	7	30	32	.25	11	.09	34 4
Elizabeth	--------	7	19	28	--------	3	--------	10.7
Jersey City	315, 000	7	28	58	.18	13	.04	22 4
Newark	453, 000	6	69	56	12	5	.01	8 9
Paterson	142, 000	7	21	15	.11	3	02	20.0
Trenton	132, 000	7	34	46	.35	[1] 10	08	21.7
New York:								
Albany	118, 000	7	57	42	36	7	.06	16.7
Buffalo	538, 000	7	80	112	21	24	.04	21.4
New York	5, 873, 000	7	899	1, 417	.24	199	.03	14.0
Rochester	317, 000	7	40	51	.16	6	.02	11.8
Sycrause	182, 000	7	37	15	.08	4	.02	26.7
Utica	102, 000	7	20	[1] 25	.25	4	.04	16.0
Yonkers	114, 000	7	11	41	.36	2	.02	4.9

[1] Includes nonresidents.

[2] Typhoid fever not reportable in Iowa.

Reported Prevalence for the Year 1925—Continued

TYPHOID FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Ohio								
Akron		7	46	19		4		21.1
Canton	106,000	7	13	8	0.08	1	0.01	12.5
Cincinnati	409,000	7	62	117	.29	17	.04	14.5
Cleveland	936,000	7	114	93	.10	14	.01	15.1
Columbus	280,000	7	41	43	.15	12	.04	27.9
Dayton	173,000	7	29	8	.05	3	.02	37.5
Toledo	287,000	7	61	91	.32	16	.06	17.6
Youngstown	160,000	7	48	[1] 26	.16	4	.02	15.4
Oklahoma								
Oklahoma City		6	47	163		13		8.0
Tulsa	124,000	3	74	69	.56	26	.21	37.7
Oregon								
Portland		7	41	59		6		10.2
Pennsylvania								
Erie		7	29	23		0		
Philadelphia	1,979,000	7	354	234	.12	45	.02	19.2
Pittsburgh	632,000	7	91	96	.15	20	.03	20.8
Reading	113,000	7	34	17	.15	1	.01	5.9
Scranton	142,000	7	11	51	.36	0		
Rhode Island								
Providence	268,000	7	46	50	.19	9	.03	18.0
Tennessee								
Memphis	175,000	7	136	[1] 337	1.93	[1] 50	.29	14.8
Nashville	136,000	7	110	201	1.48	27	.20	13.4
Texas								
Dallas	194,000	7	86	94	.48	34	.18	36.2
El Paso	105,000	4	37	[1] 40	.38	8	.08	20.0
Fort Worth	155,000	6	26	35	.23	8	.05	22.9
Houston		6	47	45		9		20.0
San Antonio	198,000	7	48	59	.30	16	.08	27.1
Utah								
Salt Lake City	131,000	7	38	79	.60	9	.07	11.4
Virginia								
Norfolk		7	37	11		1		9.1
Richmond	186,000	7	72	68	.37	10	.05	14.7
Washington:								
Seattle		7	45	67		8		11.9
Spokane	109,000	7	27	19	.17	2	.02	10.5
Tacoma	104,000	7	19	19	.18	2	.02	10.5
Wisconsin:								
Milwaukee	509,000	7	36	20	.04	[1] 6	.01	30.0
Total:								
68 cities	28,784,000		5,474	6,121	.21	1,001	.03	16.4
69 cities	28,925,000					1,008	.03	
80 cities			6,074	6,790				
81 cities						1,119		

[1] Includes nonresidents.

TYPHUS FEVER

City	Cases reported, 1925	Deaths registered, 1925	City	Cases reported, 1925	Deaths registered, 1925
Connecticut:			Missouri:		
New Haven	1	0	St. Louis	1	0
Georgia			New York		
Atlanta	7	0	New York	16	1
Maryland			Texas:		
Baltimore	5	1	Houston	3	0
Massachusetts:					
Boston	2	0			

Reported Prevalence for the Year 1925—Continued

WHOOPING COUGH

City	Estimated population, July 1, 1925	Average, 1922–1924	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
Alabama.							
Birmingham	206,000	196	163	0.79	15	0.07	10.9
California							
Los Angeles	-----	576	1,814	-----	60	-----	30.2
Oakland	254,000	107	294	1.16	20	.08	14.7
San Diego	106,000	383	685	6.46	7	.07	97.9
San Francisco	558,000	383	1,084	1.94	28	.05	38.7
Colorado							
Denver	281,000	737	670	2.38	17	.06	39.4
Connecticut							
Bridgeport	-----	95	93	-----	7	-----	13.3
Hartford	160,000	260	319	1.99	7	.04	45.6
New Haven	179,000	305	760	4.25	14	.08	54.3
Waterbury	-----	67	58	-----	2	-----	29.0
Delaware							
Wilmington	122,000	95	67	.55	3	.02	22.3
District of Columbia							
Washington	498,000	808	745	1.50	21	.04	35.5
Georgia							
Atlanta	-----	69	211	-----	41	-----	5.1
Illinois							
Chicago	2,995,000	3,611	4,496	1.50	146	.05	30.8
Indiana							
Indianapolis	359,000	928	923	2.57	19	.05	48.6
Iowa							
Des Moines	141,000	-----	-----	-----	15	.11	-----
Kansas							
Kansas City	116,000	375	363	3.13	6	.05	60.5
Kentucky							
Louisville	306,000	205	205	.67	6	.02	34.2
Louisiana							
New Orleans	414,000	172	444	1.07	43	.10	10.3
Maryland.							
Baltimore	796,000	2,141	3,538	4.44	90	.11	39.3
Massachusetts							
Boston	780,000	1,418	2,022	2.59	69	.09	29.3
Cambridge	120,000	509	502	4.18	6	.05	83.7
Fall River	129,000	187	167	1.29	14	.11	11.9
Lowell	110,000	86	48	.44	0	-----	-----
Lynn	103,000	151	162	1.57	12	.12	13.5
New Bedford	120,000	118	122	1.02	5	.04	24.4
Springfield	142,000	180	251	1.77	5	.04	50.2
Worcester	191,000	227	514	2.69	11	.06	46.7
Michigan							
Detroit	1,246,000	2,425	3,305	2.65	87	.07	38.0
Flint	130,000	240	407	3.13	1	.01	407.0
Grand Rapids	154,000	383	507	3.29	5	.03	101.4
Minnesota.							
Minneapolis	425,000	111	102	.24	19	.04	5.4
St. Paul	246,000	728	851	3.46	13	.05	65.5
Missouri:							
Kansas City	367,000	379	599	1.63	33	.09	18.2
St. Louis	822,000	1,279	476	.58	16	.02	29.7
Nebraska:							
Omaha	212,000	68	97	.46	4	.02	24.2
New Jersey							
Camden	129,000	55	163	1.26	25	.19	6.5
Elizabeth	-----	220	182	-----	5	-----	36.4
Jersey City	315,000	99	78	.25	17	.05	4.6
Newark	453,000	2,023	2,023	4.47	24	.05	84.3
Paterson	142,000	375	264	1.86	10	.07	26.4
Trenton	132,000	137	113	.86	13	.10	8.7
New York							
Albany	118,000	342	193	1.64	4	.03	48.2
Buffalo	538,000	1,038	1,004	1.87	23	.04	43.7
New York	5,873,000	5,842	4,826	.82	307	.05	15.7
Rochester	317,000	321	442	1.39	20	.06	22.1
Syracuse	182,000	344	598	3.29	16	.09	37.4
Utica	102,000	204	39	.38	0	-----	-----
Yonkers	114,000	150	113	.99	3	.03	37.7

Reported Prevalence for the Year 1925—Continued

WHOOPING COUGH—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924	1925 Cases reported	1925 Cases per 1,000 inhabitants	1925 Deaths registered	1925 Deaths per 1,000 inhabitants	1925 Cases reported for each death registered
Ohio							
Akron		823	718		4		179.5
Canton	106,000	321	122	1.15	4	0.04	30.5
Cincinnati	409,000	529	290	.71	14	.03	20.7
Cleveland	936,000	2,138	2,372	2.53	56	.06	42.4
Columbus	280,000	206	275	.98	28	.10	9.8
Dayton	173,000	69	8	.05	1	.01	8.0
Toledo	287,000	650	809	2.82	10	.03	80.9
Youngstown	160,000	344	379	2.37	13	.08	29.2
Oklahoma							
Oklahoma City		[1] 45	63		7		9.0
Tulsa	124,000	[1] 25	138	1.11	3	.02	46.0
Oregon							
Portland		127	262		17		15.4
Pennsylvania							
Erie		448	363		3		121.0
Philadelphia	1,979,000	2,407	3,110	1.57	128	.06	24.3
Pittsburgh	632,000	1,779	515	.81	15	.02	34.3
Reading	113,000	311	416	3.68	7	.06	59.4
Scranton	142,000	126	252	1.77	4	.03	63.0
Rhode Island							
Providence	268,000	157	111	.41	13	.05	8.5
Tennessee							
Memphis	175,000	313	[2] 387	2.21	[2] 13	.07	29.8
Nashville	136,000	101	33	.24	5	.04	6.6
Texas							
Dallas	194,000	512	458	2.36	5	.03	91.6
El Paso	105,000	[1] 518	163	1.55	6	.06	27.2
Fort Worth	155,000				2	.01	
Houston			10		6		1.7
San Antonio	198,000				7	.04	
Utah							
Salt Lake City	131,000	508	400	3.12	9	.07	45.4
Virginia:							
Norfolk		[1] 118	365		5		73.0
Richmond	186,000	206	120	.65	12	.06	10.0
Washington:							
Seattle		470	1,813		20		90.6
Spokane	109,000	202	341	3.13	6	.06	56.8
Tacoma	104,000	141	170	1.63	1	.01	170.0
Wisconsin							
Milwaukee	509,000	2,015	1,837	3.61	22	.04	83.5
Total							
65 cities	28,320,000	43,703	47,459	1.68	1,579	.06	30.1
68 cities	28,814,000				1,603	.06	
77 cities			53,411				
80 cities					1,780		

[1] Two years only

[2] Includes nonresidents

COURT DECISIONS RELATING TO PUBLIC HEALTH

Order of State board of purification of waters sustained.—(Rhode Island Supreme Court; Board of Purification of Waters *v.* Town of East Providence, 133 A 812; decided June 25, 1926.) The Rhode Island Board of Purification of Waters, after due notice and hearing, made an order directing the town of East Providence "to adopt, use, and operate some practicable and reasonably available system or means to prevent" sewage pollution of the Seekonk River. It was undisputed that the sewage deposited by the town constituted a

pollution and that other municipalities also polluted the river by the discharge of sewage into it. The constitutionality of chapter 125 of the General Laws of 1923, under which the board acted, was attacked by the town, and also the order of the board was alleged to be unreasonable. The supreme court, however, decided that the law in question was constitutional and sustained the board's order.

Garbage ordinance held not violated—(Kansas Supreme Court; City of Wichita *v.* Killion, and Same *v.* Landrum, 245 P. 1056; decided May 8, 1926.) A restaurant owner in the city of Wichita deposited scraps of meat and bones and refuse from the table in his restaurant in a receptacle kept for that purpose and this material would then from time to time be carried in a paper sack or bag to a place just outside the city limits, where it would be fed to some dogs, rabbits and other pets owned by the restaurant keeper. The material so fed to the animals never reached the garbage can used to contain the garbage from the restaurant. An ordinance of Wichita provided for the collection of garbage exclusively by a licensed contractor and prohibited other persons from collecting or removing garbage. The ordinance contained the following:

> That the term "garbage" as used here shall be defined and construed to mean "all organic waste or residue of animal food or vegetable matter from kitchens and dining rooms, and for the preparation or dealing in storage of meats, fowls, fruits, vegetables, and cream."

In prosecutions for violating the ordinance the supreme court held that the defendants were not guilty because the material withheld and fed to the animals was not garbage within the meaning of the ordinance.

Order of State board of health prohibiting boating on pond which was source of city water supply upheld—(Vermont Supreme Court; State *v.* Quattropani, 133 A. 352; decided May 5, 1926.) The defendant was convicted of violating an order of the State board of health prohibiting boating on a certain pond which was the source of the water supply of the city of Montpelier. This order, which was adopted by the board under statutory authority to make regulations to prevent the pollution of waters used for public water supply, was upheld by the supreme court.

Refusal to pasteurize milk not ground for denial of permit.—(Missouri Supreme Court; State ex rel. Knese et al. *v.* Kinsey et al., Board of Public Service, 282 S. W. 437; decided April 9, 1926.) In mandamus proceedings to compel the issuance of permits to milk dealers the supreme court decided that the board of public service of the city of St. Louis, acting under a city ordinance, could not refuse to issue such permits where the reason for so doing was the refusal of the milk dealers to pasteurize their milk. The court stated that

the milk dealers "have a right to deal in it [raw milk] under the statutes and constitution, and a denial of that right is supported by neither law nor reason."

PUBLIC HEALTH ENGINEERING ABSTRACTS

How Pasteurizing Plants are Inspected. Anon Health News, New York State Department of Health, vol. 3, No. 26, June 28, 1926, pp 102–103 (Abstract by Isador W Mendelsohn)

In New York State there are approximately 963 milk pasteurizing plants, of which about 500 ship their supply to and are under the control of New York City The remainder supply 92 "upstate" municipalities and are under the supervision of the State department of health All pasteurizing plants in the latter group must meet the requirements of the Sanitary Code and comply with the regulations of the department regarding construction, sanitation, equipment, and operation The division of sanitation supervises milk pasteurization.

The investigation of a pasteurizing plant in cooperation with the local health authorities includes the following: (1) Careful inspection in and around the plant and examination of all apparatus before the pasteurizing process is commenced, to determine the cleanliness of the plants, (2) observance of heating temperature, holding period, method of handling milk, accuracy of recording thermometer, method of cleaning the apparatus, pipes, and pumps after pasteurization; (3) collection of milk samples, for determination of bacterial content from mixed raw milk, from the holder after a 30-minute period, the cooler, and the bottle filler, (4) preparation of reports and transmission of copies to the plant owner, local health officer, and the district State health officer

The number of milk pasteurizing plants in the State outside of the New York City plants has increased from 315 in 1922 to 463 in 1925

A Successful Experiment in Milk Control. B. K Wilbur The Listening Post, Pennsylvania State Department of Health, vol. 4, No. 38, May and June, 1926, pp. 23–28. (Abstract by A. L. Dopmeyer.)

Geographical lines separating towns in thickly settled suburban districts in Pennsylvania have been found to make the control of the town milk supply difficult where one town had strict regulations and careful inspection, as compared to opposite conditions in an adjoining town. In order to eliminate the resulting evils, and as a result of a milk-borne typhoid fever epidemic in a community suburban to Philadelphia, a plan for coordinating the milk control activities of a number of towns was adopted, which method, after four years' operation, is said to be a success.

The following requirements were agreed upon by the boards representing the cooperating communities; (1) Uniform regulations, milk rules; (2) one chief milk control officer with necessary assistants; (3) a central laboratory control; (4) a central office of control; (5) equitable division of expenses, (6) a representative committee of management.

The operation of this plan for four years in what is known as Milk Control District No 1, State of Pennsylvania, has resulted in reduction of cost of milk control in each unit; the avoiding of overlapping of inspection and duplicate analyses, the reduction of the varieties of milk sold to three standard brands, the reduction of the average bacteria count of all milk sold, progressively from year to year to 39,400; improvement in the sanitary grades of the milk dealers; the creation of a tuberculosis free area; and the reduction of infant mortality from faulty nutrition and intestinal disorders

Relation Between the Bacterial Count of Whole Milk and That of the Cream and Skim Milk Separated from it. C. S Leete (Jour. Agr. Research (U. S), 31 (1925), No 7, pp 695-699) From Experiment Station Record, United States Department of Agriculture, vol. 54, No 6, April, 1926, p 572

"The results are reported of investigations in the Bureau of Dairying, United States Department of Agriculture, on the bacterial count as determined by the plate method of whole milk and the cream and skim milk separated from it by a centrifugal separator and by gravity. One hundred samples of whole milk having bacterial counts ranging from 9,000 to 14,410,000 and averaging 435,240 per cubic centimeter were separated by the centrifugal method The bacterial counts of the cream from this milk ranged from 7,000 to 18,600,000 and averaged 500,830 per cubic centimeter. The bacterial counts of the skim milk ranged from 9,000 to 7,500,000 and averaged 312,740. In 70 of the samples which showed increases in the count of the cream, as compared with the whole milk, the average increase was 23.87 per cent, and in 23 samples showing decreases the average decrease was 14 06 per cent Seven of the samples showed no change. Twenty-five samples of whole milk ranging in bacterial count from 2,000 to 850,000 and averaging 135,880 per cubic centimeter were separated by the gravity method. The bacterial counts of the cream from such milk ranged from 5,000 to 1,700,000, averaging 283,680. The bacterial counts of the skim milk ranged from 900 to 180,000 and averaged 33,556.

"The author concludes that gravity-separated cream shows a much higher increase in bacterial count than cream separated by the centrifugal method, but that there appears to be no reason for the custom of allowing much higher bacterial counts for cream than for milk in many milk ordinances."

The Destruction of Mosquito Larvæ in Artificial Breeding Places by the Evacuation of the Water. A. Catanei. Arch. de L'Inst Past. d'Algerie, vol 3, No. 2, 1925, pp. 142–145. (Abstract by M. A. Barber)

The evacuation of the water from artificial breeding places is not a sufficient antilarval measure, because pupæ and the larger larvæ of mosquitoes may survive in the moist bottom of the reservoir long enough to reach maturity. If such temporary evacuation of water is the only measure employed it is advisable to wash out the basin with running water after it is evacuated.

DEATH RATES IN A GROUP OF INSURED PERSONS

Rates for Principal Causes of Death for July, 1926

The accompanying table is taken from the Statistical Bulletin for August, 1926, published by the Metropolitan Life Insurance Co., and presents the mortality experience of the industrial insurance department of the company for July, 1926, as compared with June, 1926, and with July and year, 1925 The rates are based on a strength of approximately 17,000,000 insured persons in the industrial populations of the United States and Canada

The Bulletin states.

> The health situation in the industrial populations of the United States and Canada showed, in July, the usual seasonal improvement The death rate (8 2 per 1,000) marked a decided drop from the June figure (9 5) and was also slightly lower than for July of last year Every cause of death listed in the accompanying table, with the exception of typhoid fever, diarrheal diseases, and accidents, showed a reduction as compared with June, and even these three registered lower rates than in July of last year.

The most marked declines were shown for influenza, pneumonia, and measles, but appreciable decreases were also recorded in mortality from tuberculosis and the "degenerative diseases "

The Bulletin states that it will take more pronounced improvement than that shown in July to overcome in the final half of this year the relatively high mortality of the first half of the year. It is still possible, but not probable, it is stated, that the year 1926 will show an improvement in health conditions over 1925.

Death rates (annual basis) for principal causes per 100,000 lives exposed, June and July, 1926, and July and year 1925

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death	Rate per 100,000 lives exposed[1]			
	July, 1926	June, 1926	July, 1925	Year 1925[2]
Total, all causes	823.1	950.5	828.1	906.9
Typhoid fever	3.1	3.0	5.3	4.6
Measles	6.6	15.0	3.9	3.3
Scarlet fever	2.6	4.8	2.3	3.5
Whooping cough	8.7	10.3	8.2	7.7
Diphtheria	5.8	8.9	6.7	10.6
Influenza	9.3	21.1	6.9	21.9
Tuberculosis (all forms)	98.1	110.4	97.6	98.0
Tuberculosis of respiratory system	84.5	97.7	85.8	85.8
Cancer	69.1	74.1	69.6	70.5
Diabetes mellitus	13.1	15.5	13.0	15.2
Cerebral hemorrhage	48.2	54.1	47.7	53.5
Organic diseases of heart	117.2	135.8	110.3	126.6
Pneumonia (all forms)	48.0	83.5	41.2	86.5
Other respiratory diseases	10.6	13.1	8.7	13.3
Diarrhea and enteritis	31.2	23.6	41.5	36.6
Bright's disease (chronic nephritis)	61.2	73.9	60.8	69.8
Puerperal state	14.5	16.3	15.0	16.5
Suicides	6.8	7.8	7.3	6.9
Homicides	7.5	7.6	6.7	7.2
Other external causes (excluding suicides and homicides)	71.0	65.7	75.1	64.2
Traumatism by automobiles	17.3	18.8	18.3	16.5
All other causes	190.6	205.8	200.3	190.5

[1] All figures include infants insured under 1 year of age
[2] Based on provisional estimate of lives exposed to risk in 1925.

DEATHS DURING WEEK ENDED SEPTEMBER 4, 1926

Summary of information received by telegraph from industrial insurance companies for week ended September 4, 1926, and corresponding week of 1925. (From the Weekly Health Index, September 9, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Sept. 4, 1926	Corresponding week 1925
Policies in force	65,208,233	60,930,667
Number of death claims	10,557	9,874
Death claims per 1,000 policies in force, annual rate	8.4	8.4

Deaths from all causes in certain large cities of the United States during the week ended September 4, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index September 9, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Sept 4, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Sept 4, 1926 [2]
	Total deaths	Death rate [1]		Week ended Sept 4, 1926	Corresponding week, 1925	
Total (65 cities)	5,958	10 9	11 2	902	911	[3] 74
Akron	31			6	9	64
Albany [4]	25	12 3	13 7	1	5	21
Atlanta	60			8	10	
White	31			3		
Colored	29	(5)		5		
Baltimore [4]	181	11 7	11 0	25	25	73
White	135			18		64
Colored	46	(5)		7		114
Birmingham	59	14 6	14 2	14	6	
White	25			6		
Colored	34	(5)		8		
Boston	188	12 5	12 8	39	35	110
Bridgeport	16			3	3	51
Buffalo	119	11 4	11 6	20	25	83
Cambridge	27	11 5	10 5	7	11	116
Camden	22	8 8	10 1	4	6	68
Canton	20	9 5	9 3	2	1	44
Chicago [4]	601	10 3	9 6	73	89	65
Cincinnati	107	13 6	14 3	19	16	118
Cleveland	181	9 8	8 8	31	34	80
Columbus	80	14 6	12 9	12	12	110
Dallas	37	9 6	12 4	10	7	
White	33			10		
Colored	4	(5)		0		
Dayton	47	13 8	9 9	5	4	79
Denver	78	14 3	13 9	7	11	
Des Moines	33	11 8	12 9	4	2	67
Detroit	240	9 7	10 3	42	59	68
Duluth	17	7 8	4 7	3	1	70
El Paso	24	11 5	18 9	5	9	
Erie	36			6	2	114
Fall River [4]	31	12 3	9 3	9	4	131
Flint	24	9 1	9 6	10	11	165
Fort Worth	23	7 5	6 2	4	1	
White	18			4		
Colored	5	(5)		0		
Grand Rapids	21	7.0	11 5	3	4	43
Houston	39			3	11	
White	26			3		
Colored	13	(5)		0		
Indianapolis	112	15.9	14 5	15	14	110
White	95			15		127
Colored	17	(5)		0		0
Jersey City	59	9 7	9 6	4	8	28
Kansas City, Kans	25	11 1	19 8	4	7	69
White	18			1		21
Colored	7	(5)		3		394
Los Angeles	200			29	25	80
Louisville	75	12 6	13 3	11	10	95
White	57			10		100
Colored	18	(5)		1		63
Lowell	30			8	2	149
Lynn	16	8 0	10 1	3	2	75
Memphis	65	19 1	19 4	8	10	
White	38			5		
Colored	27	(5)		3		
Milwaukee	92	9 3	10 9	13	29	60
Minneapolis	98	11 8	11 6	7	7	39
Nashville [4]	53	20 2	11 9	14	2	
White	31			11		
Colored	22	(5)		3		

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births Cities left blank are not in the registration area for births.

[3] Data for 64 cities

[4] Deaths for week ended Friday, Sept 3, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Kansas City, Kans, 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D C, 25

Deaths from all causes in certain large cities of the United States during the week ended September 4, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Sept 4, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Sept 4, 1926
	Total deaths	Death rate		Week ended Sept 4, 1926	Corresponding week, 1925	
New Bedford	16			1	8	17
New Haven	38	10 9	12 2	5	7	68
New Orleans	116	14 4	17 0	20	16	
White	67			12		
Colored	49	(5)		8		
New York	1,092	9 6	10 5	173	148	70
Bronx Borough	141	8 2	8 8	8	10	27
Brooklyn Borough	365	8 5	9 4	76	60	77
Manhattan Borough	450	12 5	13 5	71	64	78
Queens Borough	91	6 2	7 7	14	12	63
Richmond Borough	45	16 4	13 6	4	2	70
Newark, N J	61	6 9	9 3	11	14	53
Norfolk	28	8 4	8 6	5	2	93
White	11			0		0
Colored	17	(5)		5		249
Oakland	44	8 8	9 7	4	4	46
Oklahoma City	27			3	3	
Omaha	48	11 6	16 3	6	17	63
Paterson	37	13 5	9 6	3	1	52
Philadelphia	445	11 6	10 4	77	60	102
Pittsburgh	132	10 8	13 3	23	34	76
Portland, Oreg	51			1	3	10
Providence	50	9 5	10 3	7	6	58
Richmond	55	15 2	10 6	11	12	138
White	33			7		137
Colored	22	(5)		4		140
Rochester	60	9 7	11 4	11	13	88
St Louis	203	12 8	13 4	19	28	
St Paul	57	12.0	12 3	6	7	53
Salt Lake City [4]	27	10 6	11 5	1	2	14
San Antonio	36	9 2	14 5	10	3	
San Diego	25	11 9	20 2	3	2	63
San Francisco	148	13 6	11 1	8	10	48
Schenectady	16	9 0	15 7	2	2	58
Seattle	55			3	3	28
Somerville	14	7 3	6 3	0	1	0
Spokane	16	7 7	4.8	2	1	47
Springfield, Mass	24	8 6	9 5	2	4	20
Syracuse	44	12 5	13 8	5	6	63
Tacoma	30	14 8	8 5	2	1	47
Toledo	64	11 4	10 0	11	12	107
Trenton	22	8 6	9 9	3	3	50
Utica	29	14 7	12 8	4	3	88
Washington, D C	99	9 8	11 3	14	11	80
White	59			9		74
Colored	40	(5)		5		91
Waterbury	22			3	0	64
Wilmington, Del	23	9 7	10 7	4	7	94
Worcester	41	11.1	9 3	10	2	115
Yonkers	22	9 9	13 8	4	1	90
Youngstown	29	9 2	8 8	8	4	102

[4] Deaths for week ended Friday, Sept 3, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population, Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Kansas City, Kans , 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C , 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended September 11, 1926

ALABAMA

	Cases
Chicken pox	3
Diphtheria	34
Influenza	11
Malaria	145
Measles	12
Mumps	14
Pellagra	17
Pneumonia	22
Poliomyelitis	1
Scarlet fever	21
Smallpox	7
Tuberculosis	35
Typhoid fever	106
Typhus fever	1
Whooping cough	55

ARIZONA

	Cases
Chicken pox	1
Diphtheria	1
Measles	3
Mumps	4
Scarlet fever	2
Tuberculosis	45
Typhoid fever	3

ARKANSAS

	Cases
Chicken pox	16
Diphtheria	8
Hookworm disease	4
Influenza	20
Malaria	106
Measles	7
Mumps	6
Paratyphoid fever	6
Pellagra	9
Poliomyelitis	1
Scarlet fever	5
Smallpox	4
Trachoma	2
Tuberculosis	19
Typhoid fever	42
Whooping cough	36

CALIFORNIA

	Cases
Cerebrospinal meningitis	
Burbank	1
Inglewood	1
Chicken pox	48
Diphtheria	56
Influenza	5
Lethargic encephalitis—Oakland	1
Measles	179
Mumps	53
Poliomyelitis	
Los Angeles	3
Pasadena	1
San Francisco	1
Stockton	1
Scarlet fever	65
Smallpox	10
Tuberculosis	129
Typhoid fever	17
Whooping cough	51

COLORADO

	Cases
Chicken pox	1
Diphtheria	10
Measles	3
Scarlet fever	9
Tuberculosis	20
Typhoid fever	8
Whooping cough	6

CONNECTICUT

	Cases
Cerebrospinal meningitis	2
Chicken pox	2
Diphtheria	8
Dysentery (bacillary)	1
German measles	1
Measles	6
Mumps	1
Paratyphoid fever	1
Pneumonia (broncho)	4
Pneumonia (lobar)	10
Poliomyelitis	3
Scarlet fever	19

CONNECTICUT—continued

	Cases
Septic sore throat	1
Tuberculosis (pulmonary)	11
Typhoid fever	9
Whooping cough	23

DELAWARE

Pneumonia	1
Scarlet fever	2
Tuberculosis	1

FLORIDA

Diphtheria	22
Hookworm disease	16
Influenza	1
Malaria	9
Measles	12
Mumps	4
Paratyphoid fever	1
Pneumonia	6
Poliomyelitis	1
Scarlet fever	2
Smallpox	13
Tetanus	2
Tuberculosis	11
Typhoid fever	16
Whooping cough	5

GEORGIA

Chicken pox	4
Conjunctivitis (infectious)	1
Diphtheria	36
Dysentery	10
Hookworm disease	2
Influenza	12
Lethargic encephalitis	1
Malaria	91
Measles	5
Mumps	6
Paratyphoid fever	3
Pellagra	6
Pneumonia	16
Scarlet fever	11
Septic sore throat	9
Smallpox	3
Tuberculosis	39
Typhoid fever	64
Typhus fever	6
Whooping cough	28

IDAHO

Diphtheria	7
Measles	1
Mumps	4
Scarlet fever	6
Whooping cough	16

ILLINOIS

Cerebrospinal meningitis—Cook County	1
Chicken pox	20
Diphtheria	48
Influenza	11
Measles	33
Mumps	13
Pneumonia	50
Poliomyelitis:	
Champaign County	1
Cook County	1
Tazewell County	1

ILLINOIS—continued

	Cases
Scarlet fever	58
Smallpox	6
Tuberculosis	205
Typhoid fever	70
Whooping cough	143

INDIANA

Chicken pox	2
Diphtheria	13
Influenza	24
Measles	15
Pneumonia	5
Poliomyelitis	1
Scarlet fever	42
Smallpox	15
Tuberculosis	59
Typhoid fever	49
Whooping cough	45

IOWA

Chicken pox	1
Diphtheria	10
Impetigo contagiosa	1
Measles	9
Poliomyelitis	1
Scarlet fever	14
Smallpox	3
Tuberculosis	14
Typhoid fever	3
Whooping cough	4

KANSAS

Cerebrospinal meningitis:	
Fort Scott	1
Topeka	1
Chicken pox	1
Diphtheria	8
Dysentery	2
German measles	1
Influenza	6
Measles	6
Mumps	2
Pellagra	1
Pneumonia	14
Poliomyelitis:	
Dunavant	1
St. John	3
Wichita	1
Scarlet fever	24
Tuberculosis	32
Typhoid fever	22
Whooping cough	41

LOUISIANA

Diphtheria	15
Influenza	10
Malaria	44
Paratyphoid fever	1
Pellagra	11
Pneumonia	34
Scarlet fever	3
Tuberculosis	37
Typhoid fever	27
Whooping cough	3

MARYLAND[1]

	Cases
Cerebrospinal meningitis	1
Chicken pox	7
Diphtheria	27
Dysentery	1
German measles	1
Impetigo contagiosa	1
Influenza	4
Lethargic encephalitis	1
Measles	3
Mumps	1
Paratyphoid fever	3
Pneumonia (broncho)	9
Pneumonia (lobar)	4
Poliomyelitis	5
Scarlet fever	17
Tetanus	1
Tuberculosis	39
Typhoid fever	64
Vincent's angina	2
Whooping cough	86

MASSACHUSETTS

	Cases
Cerebrospinal meningitis	2
Chicken pox	19
Conjunctivitis (suppurative)	5
Diphtheria	25
German measles	4
Influenza	2
Lethargic encephalitis	1
Malaria	2
Measles	22
Mumps	19
Ophthalmia neonatorum	30
Pneumonia (lobar)	24
Poliomyelitis	20
Scarlet fever	68
Septic sore throat	1
Tuberculosis (pulmonary)	75
Tuberculosis (other forms)	19
Typhoid fever	9
Whooping cough	91

MICHIGAN

	Cases
Diphtheria	50
Measles	11
Pneumonia	16
Scarlet fever	55
Smallpox	3
Tuberculosis	56
Typhoid fever	20
Whooping cough	86

MINNESOTA

	Cases
Chicken pox	13
Diphtheria	27
Measles	9
Pneumonia	3
Poliomyelitis	1
Scarlet fever	85
Tuberculosis	28
Typhoid fever	11
Whooping cough	11

[1] Week ended Friday.

MISSISSIPPI

	Cases
Diphtheria	16
Poliomyelitis	1
Scarlet fever	5
Typhoid fever	37

MISSOURI

(Exclusive of Kansas City)

	Cases
Chicken pox	2
Diphtheria	18
Malaria	3
Measles	7
Mumps	5
Scarlet fever	16
Trachoma	4
Tuberculosis	30
Typhoid fever	30
Whooping cough	18

MONTANA

	Cases
Cerebrospinal meningitis	1
Diphtheria	5
Measles	1
Mumps	1
Poliomyelitis	1
Scarlet fever	1
Typhoid fever	4
Whooping cough	8

NEBRASKA

	Cases
Chicken pox	1
Diphtheria	3
Mumps	1
Poliomyelitis	1
Scarlet fever	10
Smallpox	3
Tuberculosis	2
Typhoid fever	3
Whooping cough	17

NEW JERSEY

	Cases
Cerebrospinal meningitis	2
Chicken pox	6
Diphtheria	26
Influenza	2
Measles	10
Paratyphoid fever	1
Pneumonia	32
Poliomyelitis	1
Scarlet fever	25
Typhoid fever	34
Whooping cough	90

NEW MEXICO

	Cases
Diphtheria	3
Malaria	1
Measles	2
Mumps	1
Paratyphoid fever	2
Rabies (in animals)	2
Septic sore throat	2
Smallpox	8
Tetanus	1
Tuberculosis	22
Typhoid fever	11
Whooping cough	5

NEW YORK

(Exclusive of New York City)

	Cases
Cerebrospinal meningitis	2
Chicken pox	36
Diphtheria	54
Dysentery	2
German measles	31
Influenza	1
Malaria	2
Measles	94
Mumps	13
Ophthalmia neonatorum	2
Pneumonia	79
Poliomyelitis	56
Scarlet fever	57
Septic sore throat	2
Smallpox	2
Tetanus	3
Typhoid fever	57
Vincent's angina	8
Whooping cough	249

NORTH CAROLINA

	Cases
Chicken pox	2
Diphtheria	70
Dysentery (bacillary)	2
German measles	3
Malaria	19
Measles	25
Scarlet fever	29
Septic sore throat	1
Smallpox	2
Typhoid fever	83
Whooping cough	220

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Cerebrospinal meningitis—Creek County	1
Diphtheria	27
Influenza	21
Malaria	128
Measles	22
Pellagra	12
Pneumonia	10
Poliomyelitis	
Muskogee County	1
Osage County	1
Scarlet fever	7
Typhoid fever	142
Whooping cough	19

OREGON

	Cases
Chicken pox	4
Diphtheria	6
Influenza	6
Malaria	2
Measles	2
Mumps	4
Pneumonia	[2] 3
Scarlet fever	11
Smallpox	11
Tuberculosis	[2] 2
Typhoid fever	5
Whooping cough	6

[2] Deaths.

PENNSYLVANIA

	Cases
Chicken pox	20
Diphtheria	98
German measles	1
Impetigo contagiosa	9
Lethargic encephalitis—Philadelphia	1
Measles	86
Mumps	10
Ophthalmia neonatorum—Philadelphia	1
Pneumonia	14
Poliomyelitis	
Irwin Township [3]	1
Johnstown	1
Porter Township [3]	1
Rabies—Plum Township [3]	1
Scabies	6
Scarlet fever	97
Tetanus—Carlisle	1
Tuberculosis	113
Typhoid fever	72
Whooping cough	378

RHODE ISLAND

	Cases
Measles	1
Mumps	1
Poliomyelitis	2
Scarlet fever	1
Septic sore throat	1
Tuberculosis	1

SOUTH DAKOTA

	Cases
Diphtheria	1
Measles	10
Pneumonia	1
Scarlet fever	13
Tuberculosis	4
Typhoid fever	3
Whooping cough	8

TENNESSEE

	Cases
Cerebrospinal meningitis—Johnson City	1
Chicken pox	4
Diphtheria	22
Dysentery	3
Influenza	7
Malaria	81
Measles	3
Mumps	1
Ophthalmia neonatorum	1
Pellagra	43
Pneumonia	5
Poliomyelitis—Hamilton County	1
Scarlet fever	22
Smallpox	6
Tuberculosis	24
Typhoid fever	183
Whooping cough	50

TEXAS

	Cases
Chicken pox	5
Dengue	2
Diphtheria	15
Measles	6
Mumps	3
Paratyphoid fever	1
Pellagra	1
Pneumonia	5

[3] County not specified

TEXAS—continued

	Cases
Scarlet fever	9
Smallpox	19
Tuberculosis	20
Typhoid fever	48
Typhus fever	3
Whooping cough	67

UTAH

Chicken pox	5
Diphtheria	6
Influenza	1
Measles	6
Mumps	1
Pneumonia	1
Poliomyelitis—Salt Lake City	1
Scarlet fever	1
Smallpox	2
Whooping cough	12

VERMONT

Chicken pox	2
Measles	10
Mumps	3
Scarlet fever	6
Whooping cough	26

WASHINGTON

Cerebrospinal meningitis	5
Chicken pox	10
Diphtheria	9
German measles	3
Measles	2
Mumps	4
Pneumonia	1
Scarlet fever	30
Smallpox	12
Tuberculosis	37
Typhoid fever	18
Whooping cough	14

WEST VIRGINIA

	Cases
Chicken pox	1
Diphtheria	14
Influenza	1
Measles	12
Poliomyelitis	
Fayette County	4
Wheeling	1
Scarlet fever	15
Smallpox	12
Tuberculosis	8
Typhoid fever	45
Whooping cough	41

WISCONSIN

Milwaukee	
Cerebrospinal meningitis	2
Chicken pox	7
Diphtheria	9
German measles	1
Measles	5
Mumps	3
Pneumonia	8
Scarlet fever	11
Tuberculosis	20
Typhoid fever	1
Whooping cough	75
Scattering	
Cerebrospinal meningitis	1
Chicken pox	5
Diphtheria	14
German measles	2
Influenza	1
Measles	83
Mumps	2
Pneumonia	1
Scarlet fever	20
Smallpox	1
Tuberculosis	29
Typhoid fever	5
Whooping cough	110

Reports for Week Ended September 4, 1926

DISTRICT OF COLUMBIA

	Cases
Diphtheria	7
Pneumonia	7
Scarlet fever	6
Tuberculosis	20
Typhoid fever	3
Whooping cough	11

NORTH DAKOTA

Chicken pox	1
Diphtheria	2
Measles	2
Pneumonia	1
Scarlet fever	21
Smallpox	7
Trachoma	9
Tuberculosis	6
Typhoid fever	1
Whooping cough	16

SOUTH CAROLINA

	Cases
Chicken pox	8
Dengue	2
Diphtheria	35
Hookworm disease	31
Influenza	15
Malaria	467
Measles	8
Paratyphoid fever	14
Pellagra	50
Poliomyelitis	5
Scarlet fever	3
Smallpox	3
Tuberculosis	40
Typhoid fever	118
Whooping cough	20

VIRGINIA

Cerebrospinal meningitis—Hanover County	1

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
July, 1926										
California	15	400	13	6	823	6	17	269	65	110
District of Columbia	1	49	6		114	1	1	21	0	6
Hawaii Territory	0	14	30		11		0	3	0	14
Rhode Island	1	14	0	1	101		0	13	0	0
August, 1926										
Arizona		18		1	5		1	14	1	10
Connecticut	1	31	12	1	121		5	53	0	35
District of Columbia	1	27	6		8	0	1	33	2	14
Georgia	0	42	67	322	12	16	1	20	14	321

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended August 28, 1926, 36 States reported 738 cases of diphtheria For the week ended August 29, 1925, the same States reported 855 cases of this disease. Ninety-eight cities, situated in all parts of the country and having an aggregate population of more than 30,300,000, reported 377 cases of diphtheria for the week ended August 28, 1926 Last year for the corresponding week they reported 409 cases The estimated expectancy for these cities was 540 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics

Measles —Thirty-two States reported 746 cases of measles for the week ended August 28, 1926, and 361 cases of this disease for the week ended August 29, 1925 Ninety-eight cities reported 156 cases of measles for the week this year, and 153 cases last year.

Poliomyelitis —The health officers of 37 States reported 118 cases of poliomyelitis for the week ended August 28, 1926. The same States reported 295 cases for the week ended August 29, 1925.

Scarlet fever —Scarlet fever was reported for the week as follows: Thirty-six States—this year, 662 cases; last year, 630 cases; 98 cities — this year, 318 cases; last year, 250 cases, estimated expectancy, 245 cases.

Smallpox.—For the week ended August 28, 1926, 36 States reported 103 cases of smallpox Last year for the corresponding week they reported 101 cases Ninety-eight cities reported smallpox for the week as follows: 1926, 23 cases; 1925, 44 cases; estimated expectancy, 26 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—One thousand two hundred and sixty-three cases of typhoid fever were reported for the week ended August 28, 1926,

by 35 States For the corresponding week of 1925, the same States reported 1,262 cases of this disease. Ninety-eight cities reported 233 cases of typhoid fever for the week this year and 257 cases for the corresponding week last year. The estimated expectancy for these cities was 243 cases.

Influenza and pneumonia—Deaths from influenza and pneumonia were reported for the week by 92 cities, with a population of more than 29,600,000, as follows: 1926, 289 deaths; 1925, 360 deaths.

City reports for week ended August 28, 1926

The "estimated expectancy" given for diptheria, poliomyelitis, scarlet fever, smallpox, and tyhpoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine.									
Portland	75,333	1	0	0	0	0	0	0	0
New Hampshire									
Concord	22,546	0	0	0	0	0	0	0	3
Manchester	83,097	0	1	0	0	0	0	0	0
Vermont									
Barre	10,008	0	0	0	0	0	0	0	0
Burlington	24,089	0	0	1	0	0	0	0	0
Massachusetts									
Boston	779,620	2	31	10	2	0	13	9	10
Fall River	128,993	0	2	2	1	0	0	4	0
Springfield	142,065	0	2	0	0	0	1	0	0
Worcester	190,757	1	2	4	0	0	1	0	0
Rhode Island									
Pawtucket	69,760	0	0	0	0	0	0	0	1
Providence	267,918	0	3	1	0	0	0	0	0
Connecticut									
Bridgeport	(1)	0	4	2	0	0	0	0	0
Hartford	160,197	0	3	1	1	0	0	0	0
New Haven	178,927	0	2	1	0	0	1	0	0
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	4	12	3	--------	0	0	2	7
New York	5,873,356	11	99	69	18	5	13	13	64
Rochester	316,786	0	4	6	--------	0	1	2	1
Syracuse	182,003	3	3	0	--------	0	5	0	0
New Jersey									
Camden	128,642	0	1	3	0	0	0	0	0
Newark	452,513	0	6	4	1	0	1	1	8
Trenton	132,020	0	2	1	0	0	0	0	1
Pennsylvania:									
Philadelphia	1,979,364	6	33	24	--------	1	5	0	23
Pittsburgh	631,563	0	15	2	--------	0	4	0	7
Reading	112,707	1	2	0	--------	0	1	0	1

[1] No estimate made

City reports for week ended August 28, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	0	6	0	0	0	2	0	6
Cleveland	936,485	18	19	29	0	1	0	0	6
Columbus	279,836	1	2	5	0	1	0	0	1
Toledo	287,380	0	5	0	0	0	4	0	1
Indiana									
Fort Wayne	97,846	0	1	0	0	0	0	0	2
Indianapolis	358,819	0	5	2	0	0	1	0	3
South Bend	80,091	0	1	0	0	0	2	0	0
Terre Haute	71,071	0	1	1	0	0	0	0	0
Illinois									
Chicago	2,995,239	8	58	32	4	2	23	8	21
Peoria	81,564	0	2	0	0	0	1	1	1
Springfield	63,923	0	0	0	0	0	1	1	0
Michigan									
Detroit	1,245,824	1	26	31	2	0	1	6	9
Flint	130,316	0	4	1	0	0	9	0	2
Grand Rapids	153,698	1	2	2	0	0	1	0	1
Wisconsin									
Kenosha	50,891	1	1	1	0	0	17	0	0
Madison	46,385	-	0	-	-	-	-	-	-
Milwaukee	509,192	9	10	6	0	0	4	7	3
Racine	67,707	0	0	0	0	0	2	1	1
Superior	39,671	0	0	1	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	0	2	0	0	0	6	0	1
Minneapolis	425,435	5	13	11	0	0	0	0	2
St. Paul	246,001	2	12	7	0	2	2	0	8
Iowa									
Davenport	52,469	0	0	0	0	-	1	0	-
Sioux City	76,411	1	0	0	0	-	0	0	-
Waterloo	36,771	0	0	0	0	-	2	1	-
Missouri									
Kansas City	367,481	0	4	0	2	2	0	0	2
St. Joseph	78,342	0	1	0	0	0	0	0	1
St. Louis	821,543	6	18	20	0	0	0	0	-
North Dakota									
Fargo	26,403	1	0	0	0	0	0	0	0
Grand Forks	14,811	0	0	0	0	-	0	0	-
South Dakota									
Sioux Falls	30,127	-	1	-	-	-	-	-	-
Nebraska									
Lincoln	60,941	0	0	0	0	1	0	0	0
Omaha	211,768	0	6	1	0	0	0	0	4
Kansas									
Topeka	55,411	0	0	1	0	0	0	0	0
Wichita	88,367	0	0	0	0	0	0	0	2
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	1	1	0	0	0	0	1
Maryland									
Baltimore	796,296	4	12	5	1	0	1	3	8
Cumberland	33,741	0	1	0	0	0	0	0	0
Frederick	12,035	0	1	0	0	0	0	0	0
District of Columbia									
Washington	497,906	1	3	7	1	1	0	0	5
Virginia									
Lynchburg	30,395	0	0	0	0	0	1	0	0
Norfolk	(1)	0	0	3	0	0	0	1	3
Richmond	186,403	0	7	10	0	0	3	0	2
Roanoke	58,208	0	3	0	0	0	0	0	1
West Virginia									
Charleston	49,019	0	1	0	0	0	0	0	0
Huntington	63,485	0	1	1	0	0	0	0	5
Wheeling	56,208	0	1	0	0	0	0	0	1
North Carolina									
Raleigh	30,371	0	0	1	0	0	0	0	0
Wilmington	37,011	0	1	0	0	0	0	0	0
Winston-Salem	69,031	0	1	1	0	0	0	0	0

City reports for week ended August 28, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
SOUTH ATLANTIC—con									
South Carolina									
Charleston	73,125	0	0	2	18	0	0	0	2
Columbia	41,225	0	1	0	0	0	0	0	0
Greenville	27,311	0	0	0	0	0	0	0	0
Georgia									
Atlanta	(1)	0	3	2	2	0	0	1	4
Brunswick	16,809	-------	0	-------	-------	-------	-------	-------	-------
Savannah	93,134	0	1	0	1	0	0	0	0
Florida									
Miami	69,754	0	-------	3	0	0	2	0	2
St Petersburg	26,847	-------	0	-------	-------	0	-------	-------	0
Tampa	94,743	0	1	1	0	0	3	0	4
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	0	0	0	0	0	0	0
Louisville	305,935	0	4	1	0	0	0	0	4
Tennessee									
Memphis	174,533	1	4	0	0	0	1	0	2
Nashville	136,220	0	0	4	0	0	1	0	0
Alabama									
Birmingham	205,670	2	3	4	0	0	5	0	2
Mobile	65,955	0	1	1	0	0	0	0	1
Montgomery	46,481	0	1	1	0	0	0	1	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	0	0	0	-------	0	0	-------
Little Rock	74,216	0	0	0	0	0	1	0	0
Louisiana									
New Orleans	414,493	0	6	2	6	1	0	0	8
Shreveport	57,857	0	0	0	0	0	0	0	2
Oklahoma									
Oklahoma City	(1)	0	1	0	0	0	0	0	2
Texas									
Dallas	194,450	2	3	5	0	0	0	1	1
Galveston	48,375	0	0	0	0	0	0	0	1
Houston	164,954	0	2	1	0	0	0	0	0
San Antonio	198,069	0	1	0	0	0	0	0	4
MOUNTAIN									
Montana									
Billings	17,971	0	0	0	0	0	0	0	0
Great Falls	29,883	0	1	0	0	0	0	0	1
Helena	12,037	0	0	0	0	0	0	0	1
Missoula	12,668	0	0	0	0	0	0	0	0
Idaho									
Boise	23,042	0	1	0	0	0	0	0	0
Colorado									
Denver	280,911	0	9	7	-------	2	0	0	4
Pueblo	43,787	0	3	0	0	0	0	0	0
New Mexico									
Albuquerque	21,000	0	0	0	0	0	1	1	0
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	2
Utah									
Salt Lake City	130,948	1	2	1	0	0	3	0	1
Nevada									
Reno	12,665	0	0	0	0	0	0	0	1
PACIFIC									
Washington									
Seattle	(1)	2	3	2	0	-------	1	3	-------
Spokane	108,897	1	2	0	0	-------	0	0	-------
Tacoma	104,455	0	2	1	0	0	2	0	1
Oregon									
Portland	282,383	2	4	5	0	0	5	4	7
California									
Los Angeles	(1)	1	21	25	2	0	8	0	4
Sacramento	72,260	2	2	2	0	0	0	1	0
San Francisco	557,530	9	14	4	0	0	24	12	1

1 No estimate made.

7938°—26——4

City reports for week ended August 28, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine:											
Portland	0	0	0	0	0	0	1	1	0	0	13
New Hampshire:											
Concord	0	0	0	0	0	0	1	0	0	0	[illegible]
Manchester	1	0	0	0	0	1	1	0	0	0	1
Vermont:											
Barre	0	0	0	0	0	2	0	0	0	0	2
Burlington	1	0	0	0	0	0	0	0	0	1	10
Massachusetts:											
Boston	13	10	0	0	0	7	4	2	0	44	186
Fall River	1	2	0	0	0	3	2	1	0	5	24
Springfield	1	1	0	0	0	1	1	1	0	0	29
Worcester	2	3	0	0	0	2	1	1	0	0	37
Rhode Island:											
Pawtucket	0	0	0	0	0	0	1	0	0	0	14
Providence	2	4	0	0	0	3	2	0	0	3	53
Connecticut:											
Bridgeport	2	0	0	0	0	1	1	1	0	1	28
Hartford	1	2	0	0	0	1	2	0	0	5	35
New Haven	2	1	0	0	0	1	3	1	0	1	53
MIDDLE ATLANTIC											
New York:											
Buffalo	4	4	0	0	0	8	3	1	0	19	118
New York	22	19	0	1	0	[1] 84	44	58	6	63	1,036
Rochester	3	1	0	0	0	3	1	2	1	5	60
Syracuse	3	2	0	0	0	0	1	0	0	7	43
New Jersey:											
Camden	1	0	0	0	0	1	2	1	0	5	23
Newark	3	4	0	0	0	8	2	1	1	37	114
Trenton	1	1	0	0	0	2	2	5	1	0	31
Pennsylvania:											
Philadelphia	16	31	0	0	0	27	13	9	0	52	354
Pittsburgh	9	3	1	0	0	6	4	1	0	21	147
Reading	0	0	0	0	0	0	2	0	0	8	26
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	3	4	0	0	0	8	3	2	0	6	129
Cleveland	7	9	1	0	0	21	5	3	0	50	166
Columbus	2	2	0	0	0	3	2	0	0	5	64
Toledo	5	3	0	0	0	3	2	5	0	23	52
Indiana:											
Fort Wayne	0	0	0	0	0	0	2	2	3	1	26
Indianapolis	3	3	0	0	0	4	2	0	1	14	100
South Bend	1	1	1	0	0	0	0	1	0	1	14
Terre Haute	0	0	0	0	0	0	0	0	0	0	8
Illinois:											
Chicago	25	21	0	0	0	43	7	10	1	60	533
Peoria	2	3	0	0	0	0	0	0	0	1	20
Springfield	0	1	0	0	0	0	1	0	1	5	14
Michigan:											
Detroit	22	22	2	0	0	17	5	5	2	73	212
Flint	2	3	0	6	0	0	1	0	0	2	20
Grand Rapids	2	1	1	0	0	2	1	2	0	4	19
Wisconsin:											
Kenosha	0	1	0	0	0	1	0	3	0	24	7
Madison	0	------	0	------	------	------	0	------	------	------	------
Milwaukee	7	13	1	0	0	3	1	1	1	79	74
Racine	1	0	0	0	0	0	0	0	0	2	8
Superior	1	0	1	4	0	1	0	0	0	0	9
WEST NORTH CENTRAL											
Minnesota:											
Duluth	4	9	0	0	0	1	0	0	0	1	21
Minneapolis	10	21	1	0	0	8	2	2	0	4	92
St. Paul	4	12	1	0	0	2	0	3	0	6	41

[1] Pulmonary tuberculosis only.

City reports for week ended August 28, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL—continued											
Iowa											
Davenport	0	1	0	0	-------	-------	0	0	-------	2	-------
Sioux City	0	0	1	0	-------	-------	0	0	-------	5	-------
Waterloo	0	0	0	0	-------	-------	0	1	-------	1	-------
Missouri											
Kansas City	2	0	0	0	0	5	3	3	0	6	85
St Joseph	1	0	0	0	0	1	0	4	0	0	29
St Louis	7	18	0	0	0	8	8	7	1	20	158
North Dakota											
Fargo	0	1	1	0	0	0	0	0	0	3	4
Grand Forks	0	1	0	0	-------	-------	0	6	-------	0	-------
South Dakota											
Sioux Falls	0	-------	0	-------	-------	-------	0	-------	-------	-------	-------
Nebraska											
Lincoln	0	0	0	0	0	0	0	0	0	0	13
Omaha	1	2	1	0	0	6	0	0	0	0	53
Kansas											
Topeka	1	2	0	0	0	1	2	0	1	4	19
Wichita	1	1	1	0	0	0	2	1	0	16	25
SOUTH ATLANTIC											
Delaware											
Wilmington	0	2	0	0	0	[illegible]	1	[illegible]	0	4	27
Maryland											
Baltimore	6	2	0	0	0	15	10	4	1	49	164
Cumberland	0	1	0	0	0	1	1	0	0	0	12
Frederick	0	0	0	0	0	0	0	0	0	0	5
District of Columbia											
Washington	3	14	0	0	0	13	4	3	0	13	109
Virginia											
Lynchburg	0	0	0	0	0	0	2	1	0	2	7
Norfolk	0	0	0	0	0	4	2	0	0	4	-------
Richmond	3	5	0	0	0	2	2	4	0	0	45
Roanoke	1	0	0	0	0	1	3	2	0	0	17
West Virginia											
Charleston	0	0	0	0	0	1	2	1	0	0	10
Huntington	1	3	0	0	0	0	2	0	0	0	15
Wheeling	1	0	0	0	0	0	1	0	0	1	13
North Carolina											
Raleigh	0	0	0	1	0	0	1	1	0	17	12
Wilmington	0	1	0	0	0	2	0	0	0	2	11
Winston-Salem	0	0	1	0	0	2	3	1	0	0	19
South Carolina											
Charleston	0	0	0	0	0	1	3	1	0	0	18
Columbia	0	0	0	0	0	0	1	0	0	0	-------
Greenville	1	0	0	0	0	1	0	0	0	4	3
Georgia											
Atlanta	3	5	1	0	0	4	4	7	0	0	63
Brunswick	0	-------	0	-------	-------	-------	0	-------	-------	-------	-------
Savannah	0	0	0	0	0	2	1	3	1	0	28
Florida											
Miami	-------	1	-------	0	0	2	-------	1	1	2	32
St Petersburg	0	-------	0	-------	0	0	0	-------	0	-------	2
Tampa	0	1	0	4	0	2	1	2	1	0	25
EAST SOUTH CENTRAL											
Kentucky											
Covington	0	1	0	0	0	0	0	2	0	4	15
Louisville	1	2	0	0	0	7	5	6	1	5	74
Tennessee											
Memphis	1	3	0	0	0	4	8	12	1	15	61
Nashville	1	2	0	0	0	4	7	19	1	6	55
Alabama											
Birmingham	3	4	0	0	0	3	7	3	0	0	56
Mobile	0	0	0	0	0	3	1	3	0	0	14
Montgomery	1	0	0	0	0	0	1	0	0	1	15

City reports for week ended August 28, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	0	0			0	0		4	
Little Rock	0	1	0	0	0	1	2	0	0	1	
Louisiana											
New Orleans	0	0	0	1	0	11	5	5	1	1	147
Shreveport	0	2	0	0	0	3	5	0	1	0	20
Oklahoma											
Oklahoma City	1	2	0	0	0	1	2	4	0	0	18
Texas											
Dallas	2	2	1	1	0	1	3	2	1	7	39
Galveston	0	0	0	0	0	0	0	0	0	0	10
Houston	1	0	1	0	0	4	1	0	0	0	37
San Antonio	0	1	0	0	0	7	1	2	0	0	45
MOUNTAIN											
Montana											
Billings	0	0	0	0	0	0	0	0	0	0	6
Great Falls	0	0	0	0	0	0	0	0	0	0	6
Helena	0	1	0	0	0	0	0	0	0	0	3
Missoula	0	1	0	0	0	0	0	0	0	0	6
Idaho.											
Boise	1	0	0	0	0	0	0	0	0	0	3
Colorado											
Denver	2	2	2	0	0	8	3	1	0	2	62
Pueblo	0	0	0	0	0	0	0	0	0	0	5
New Mexico											
Albuquerque	1	0	0	0	0	4	1	0	0	3	18
Arizona											
Phoenix		0	0	0	0	5	0	0	0	0	12
Utah											
Salt Lake City	1	3	0	0	0	3	2	1	0	14	29
Nevada											
Reno	1	0	0	0	0	0	0	0	0	0	3
PACIFIC											
Washington											
Seattle	3	4	1	1			2	5		9	
Spokane	3	0	1	0			0	0		0	
Tacoma	2	1	1	3	0	0	0	2	0	6	15
Oregon.											
Portland	3	9	4	3	0	3	1	2	0	1	
California											
Los Angeles	6	11	2	1	0	35	5	2	0	2	203
Sacramento	0	1	0	0	0	3	1	4	0	0	18
San Francisco	5	11	1	0	0	8	2	1	0	10	126

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts.									
Boston	0	0	1	0	0	0	2	1	0
Springfield	0	0	0	0	0	0	0	0	3
Worcester	0	0	0	0	0	0	0	2	1
Rhode Island									
Providence	0	0	0	0	0	0	0	0	1
Connecticut									
Bridgeport	0	0	1	1	0	0	0	0	0

City reports for week ended August 28, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
MIDDLE ATLANTIC									
New York									
Buffalo	1	0	0	0	0	0	0	24	1
New York	2	2	8	5	0	1	8	2	0
Syracuse	0	0	0	0	0	0	1	8	1
EAST NORTH CENTRAL									
Ohio									
Columbus	1	0	0	0	0	0	0	0	0
Illinois									
Chicago	0	0	1	1	0	0	5	2	1
Michigan									
Detroit	0	0	3	0	0	0	0	3	0
WEST NORTH CENTRAL									
Missouri									
St Louis	0	0	0	0	0	0	1	1	0
Nebraska									
Omaha	0	0	0	0	0	0	1	1	0
Kansas									
Topeka	0	1	0	0	0	0	0	0	0
SOUTH ATLANTIC [1]									
Delaware									
Wilmington	0	0	0	0	0	0	0	4	0
Maryland									
Baltimore	0	0	1	1	0	0	1	1	0
District of Columbia									
Washington	0	0	0	0	0	0	1	1	0
Virginia									
Norfolk	0	0	1	0	0	0	0	0	0
Richmond	0	0	0	0	0	0	0	1	1
North Carolina									
Raleigh	0	0	0	0	0	3	0	0	0
Wilmington	0	0	0	0	0	0	0	1	0
Winston-Salem	0	0	0	0	1	1	0	0	0
South Carolina									
Charleston [1]	0	0	0	0	2	0	0	0	0
EAST SOUTH CENTRAL									
Kentucky									
Louisville	0	0	0	0	0	0	0	1	1
Alabama									
Birmingham	0	0	0	0	4	2	0	0	0
Mobile	0	0	0	1	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	3	0	0	0
Louisiana									
Shreveport	0	0	0	0	0	1	0	0	0
Texas									
Dallas	0	0	0	0	1	0	0	0	0
Houston	0	0	0	1	0	1	0	0	0
San Antonio	0	0	0	0	0	0	0	1	1
MOUNTAIN									
Utah									
Salt Lake City	0	0	0	0	0	0	1	0	1
PACIFIC									
Washington									
Seattle	0	0	0	0	0	0	0	3	0
California									
Los Angeles	0	0	0	1	0	0	1	1	0
Sacramento	0	0	0	0	1	0	0	0	0
San Francisco	0	0	0	0	0	0	0	1	0

[1] Dengue—4 cases at Charleston, S C, and 1 case at Savannah, Ga

The following table gives the rates per 100,000 population for 102 cities for the five-week period ended August 28, 1926, compared with those for a like period ended August 29, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 102 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926 The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926 The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, July 25 to August 28, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926
102 cities	[2] 75	[3] 80	[4] 83	[5] 78	77	[5] 69	68	[6] 68	[7] 72	[8] 65
New England	60	10	79	40	89	31	50	47	11	50
Middle Atlantic	92	103	83	88	78	62	73	59	63	56
East North Central	69	83	94	[9] 105	68	[9] 101	51	[9] 87	68	[9] 75
West North Central	97	[3] 85	[10] 105	[3] 52	107	[3] 56	99	[11] 85	115	[3] 81
South Atlantic	[2] 48	21	52	43	69	29	60	60	[7] 68	[12] 62
East South Central	11	21	26	10	32	57	58	21	37	57
West South Central	40	39	22	39	48	25	57	[13] 66	92	31
Mountain	148	91	[14] 66	118	157	73	74	146	166	73
Pacific	61	119	141	102	80	105	110	62	105	92

MEASLES CASE RATES

	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926
102 cities	[2] 70	[3] 103	[4] 51	[5] 66	46	[5] 57	30	[6] 41	[7] 27	[8] 27
New England	180	83	127	83	125	69	93	52	86	38
Middle Atlantic	77	63	69	42	57	33	38	27	84	15
East North Central	68	171	44	[9] 96	35	[9] 77	21	[9] 60	20	[9] 32
West North Central	30	[3] 93	[10] 10	[3] 58	24	[3] 66	6	[11] 29	4	[3] 20
South Atlantic	[2] 68	115	42	47	40	81	33	36	[7] 23	[12] 15
East South Central	26	93	11	42	16	31	5	36	11	36
West South Central	0	9	0	9	9	4	9	[13] 9	0	4
Mountain	102	127	[14] 19	137	18	64	28	18	28	27
Pacific	33	121	28	121	19	94	11	78	6	94

SCARLET FEVER CASE RATES

	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926
102 cities	[2] 54	[3] 73	[4] 51	[5] 61	57	[5] 51	51	[6] 48	[7] 45	[8] 55
New England	72	118	98	104	81	69	89	73	67	54
Middle Atlantic	37	52	33	38	36	30	23	29	27	32
East North Central	60	85	48	[9] 79	54	[9] 56	54	[9] 47	45	[9] 55
West North Central	121	[3] 143	[10] 117	[3] 101	129	[3] 119	143	[11] 123	109	[3] 133
South Atlantic	[2] 34	34	21	39	38	30	40	39	[7] 39	[12] 59
East South Central	58	62	58	31	37	47	32	36	26	62
West South Central	26	39	53	17	66	22	48	[13] 18	18	26
Mountain	83	36	[14] 38	64	92	36	65	36	28	64
Pacific	47	86	61	84	83	86	41	78	66	75

Footnotes on following page at end of table.

Summary of weekly reports from cities, July 25 to August 28, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

SMALLPOX CASE RATES

	Week ended—									
	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926
102 cities	[2]9	[3]5	[4]9	[5]8	7	[5]7	6	[6]2	[7]8	[8]4
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	1	0	1	0	0	0	1	1	0
East North Central	3	6	6	[9]9	3	[9]1	2	[9]2	8	[9]7
West North Central	14	[3]4	[10]8	[3]14	16	[3]4	6	[11]2	4	[3]0
South Atlantic	[2]2	2	2	11	2	11	4	6	[7]12	[12]9
East South Central	21	5	47	16	21	26	37	5	53	0
West South Central	4	4	13	13	9	22	4	[13]0	13	9
Mountain	55	9	[14]19	9	9	73	9	0	9	0
Pacific	80	32	64	24	64	32	41	5	28	13

TYPHOID FEVER CASE RATES

	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926
102 cities	[2]40	[3]30	[4]40	[5]29	46	[5]35	55	[6]41	[7]45	[8]40
New England	22	14	26	12	38	17	31	17	26	19
Middle Atlantic	30	23	23	19	33	24	44	34	30	39
East North Central	10	10	20	[9]12	17	[9]19	29	[9]17	26	[9]18
West North Central	46	[3]22	[10]41	[3]18	55	[3]24	46	[11]50	34	[3]42
South Atlantic	[2]64	54	56	66	86	100	104	94	[7]89	[12]57
East South Central	168	259	252	182	200	140	168	187	163	233
West South Central	154	47	123	60	97	47	128	[13]44	106	39
Mountain	55	36	[14]104	27	102	73	102	73	111	18
Pacific	44	11	17	30	41	30	61	24	52	38

INFLUENZA DEATH RATES

	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926
96 cities	[2]1	[3]2	[14]2	[5]2	2	[5]1	2	[5]3	[7]3	[8]3
New England	0	0	5	0	0	0	0	0	0	0
Middle Atlantic	1	1	2	2	3	1	2	1	3	3
East North Central	0	1	3	[9]1	3	[9]0	1	[9]3	4	[9]3
West North Central	0	[3]0	0	[3]0	0	[3]2	0	[3]2	2	[3]8
South Atlantic	[2]2	2	6	4	0	0	0	2	[7]2	[12]2
East South Central	0	5	5	0	5	10	11	0	5	0
West South Central	0	24	5	5	0	14	10	28	15	5
Mountain	0	0	[14]0	9	9	0	9	0	9	18
Pacific	0	4	0	11	0	0	7	7	0	0

PNEUMONIA DEATH RATES

	Aug 1, 1925	July 31, 1926	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926
96 cities	[2]59	[3]48	[14]52	[5]54	60	[5]50	53	[5]54	[7]61	[8]48
New England	53	33	36	54	29	31	38	40	41	33
Middle Atlantic	65	41	65	56	73	62	65	58	65	56
East North Central	48	48	36	[9]42	47	[9]35	40	[9]34	50	[9]38
West North Central	40	[3]57	51	[3]51	42	[3]25	30	[3]49	53	[3]42
South Atlantic	[2]60	51	50	68	73	56	60	86	[7]80	[12]59
East South Central	68	62	63	52	58	52	74	36	63	47
West South Central	116	76	68	104	82	113	77	71	106	76
Mountain	74	55	[14]28	64	55	82	65	82	74	73
Pacific	62	71	69	57	80	39	47	78	62	21

[1] The figures given in this table are rates per 100,000 population, annual basis—and not the number of cases reported Populations used are estimated as of July 1, 1925 and 1926, respectively
[2] Tampa, Fla , not included
[3] Sioux Falls, S Dak , not included
[4] Waterloo, Iowa, and Helena, Mont , not included
[5] Madison, Wis , and Sioux Falls, S Dak , not included
[6] Madison, Wis., Sioux City, Iowa, Sioux Falls, S Dak , and Fort Smith, Ark.. not included.
[7] Greenville, S C , not included
[8] Madison, Wis , Sioux Falls, S Dak , and Brunswick, Ga , not included.
[9] Madison, Wis , not included
[10] Waterloo, Iowa, not included
[11] Sioux City, Iowa, and Sioux Falls, S Dak , not included
[12] Brunswick, Ga , not included
[13] Fort Smith, Ark , not included
[14] Helena, Mont , not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	102	96	29,930,185	30,458,186	29,251,658	29,764,201
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	13	11	2,580,151	2,619,719	2,461,380	2,490,036
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,460,144

FOREIGN AND INSULAR

THE FAR EAST

Report for two weeks ended August 21, 1926—The following reports for the two weeks ended August 21, 1926, were transmitted by the far eastern bureau of the secretariat of the health section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Week Ended Saturday, August 14. 1926

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt, Alexandria	0	0	0	0	1	1
British India						
Calcutta	--------	0	--------	5	2	1
Bombay	--------	2	--------	0	6	4
Madras	--------	0	------	0	5	3
Negapatam	--------	0	--------	5	0	0
Karachi	--------	0	--------	0	3	1
Siam, Bangkok	0	0	2	1	9	5
Dutch East Indies, Cheribon [1]	0	0	0	0	0	0
French Indo-China, Saigon and Cholon	0	0	0	0	2	0
China						
Amoy	2	--------	2	0	0	0
Shanghai	0	0	171	78	0	0
Kwantung, Dairen	0	0	0	0	1	0
Manchuria, Harbin	0	0	36	9	0	0

[1] One infected rat was found in the port during the week

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Iraq—Basra

British India—Chittagong, Cochin, Tuticorin, Vizagapatam.

Ceylon—Colombo.

Federated Malay States—Port Swettenham.

Straits Settlements—Penang, Singapore

Dutch East Indies.—Batavia, Surabaya, Samarang, Belawan-Deli, Palembang, Sabang, Makassar, Banjermasin, Balik-Papan, Tarakan, Padang, Samarinda, Pontianak

Sarawak—Kuching

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.

Portuguese Timor.—Dilly.

Philippine Islands—Manila, Iloilo, Jolo, Cebu, Zamboanga.

French Indo-China—Turane, Haiphong.

China—Hongkong.

Formosa.—Keelung

Kwantung.—Port Arthur.

Japan.—Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki.

Korea.—Chemulpo, Fusan.

Manchuria.—Antung, Mukden, Changchun.

U. S. S. R.—Vladivostok.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.

New Guinea.—Port Moresby.

New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.

New Caledonia.—Noumea.

Fiji.—Suva.

Hawaii.—Honolulu.

AFRICA

Egypt.—Port Said, Suez.

Anglo-Egyptian Sudan.—Port Sudan, Suakin.

Eritrea.—Massaua.

French Somaliland.—Jibuti.

British Somaliland.—Berbera.

Italian Somaliland.—Mogadiscio.

Kenya.—Mombasa.

Zanzibar.—Zanzibar.

Tanganyika.—Dar-es-Salaam.

Seychelles.—Victoria.

Mauritius.—Port Louis.

Madagascar.—Tamatave, Majunga.

Portuguese East Africa.—Mozambique, Beira, Lourenço Marques.

Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

British India.—Rangoon.

Dutch East Indies.—Menado.

Week Ended Saturday, August 21, 1926

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt, Alexandria	1	0	0	0	1	1
Madagascar						
Tamatave	4	2	0	0	0	0
Majunga	4	3	0	0	0	0
Iraq, Basra	0	0	0	0	1	0
British India						
Bombay	--------	1	--------	0	2	2
Madras	--------	0	--------	0	3	1
Negapatam	--------	0	--------	0	1	1
Karachi	--------	0	--------	0	0	1
Rangoon	--------	10	--------	0	0	0
Siam, Bangkok	0	0	0	0	4	3
Dutch East Indies, Cheribon [1]	0	0	0	0	0	0
China.						
Amoy	0	0	11	--------	0	0
Shanghai	0	0	141	22	0	0
Manchuria, Harbin	0	0	98	20	0	0
U. S. S. R., Vladivostok	0	0	0	0	1	0

[1] Three infected rats were found in the port during the week.

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

British India—Chittagong, Cochin, Tuticorin, Vizagapatam.
Ceylon—Colombo
Federated Malay States—Port Swettenham
Straits Settlements—Penang, Singapore
Dutch East Indies—Batavia, Surabaya, Samarang, Belawan-Deli, Palembang, Sabang, Makassar, Banjermasin, Balik-Papan, Tarakan, Padang, Samarinda, Portianak, Menado
Sarawak—Kuching
British North Borneo—Sandakan, Jesselton, Kudat, Tawao
Portuguese Timor—Dilly
Philippine Islands—Manila, Iloilo, Jolo, Cebu, Zamboanga.
French Indo-China—Saigon and Cholon, Turane, Haiphong
China—Hongkong
Formosa—Keelung
Kwantung—Port Arthur, Dairen
Japan—Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki
Korea—Chemulpo, Fusan
Manchuria—Antung, Mukden, Changchun

AUSTRALASIA AND OCEANIA

Australia—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island
New Guinea—Port Moresby
New Zealand—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia—Noumea.
Fiji—Suva.
Hawaii.—Honolulu.

AFRICA

Egypt—Port Said, Suez
Anglo-Egyptian Sudan—Port Sudan, Suakin.
Eritrea.—Massaua.
French Somaliland—Jibuti
British Somaliland.—Berbera.
Italian Somaliland.—Mogadiscio.
Kenya—Mombasa
Zanzibar—Zanzibar
Tanganyika.—Dar-es-Salaam.
Seychelles—Victoria
Mauritius.—Port Louis
Portuguese East Africa—Mozambique, Beira, Lourenço-Marques.
Union of South Africa—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

British India.—Calcutta.

CUBA

Quarantine of Brazilian ports by Cuba on account of yellow fever—Under date of August 30, 1926, a quarantine was declared by the chief of the quarantine service of Cuba against vessels arriving from ports in Brazil.

GREAT BRITAIN

Plague—Liverpool—September 6, 1926—Under date of September 6, 1926, several cases of plague with one death were reported at Liverpool, England No sick or dead rat was discovered, and the source of infection was not known.

PHILIPPINE ISLANDS

Antiplague operations—Manila—June, 1926.—During the month of June, 1926, 4,227 rats were sent to the Bureau of Science at Manila for examination for evidences of bubonic plague No plague infection was found

PERU

Plague—July, 1926—During the month of July, 1926, plague was reported in Peru as follows:

Department	Province	Locality	Cases	Deaths	
Ancash	Santa	Huarmey			Present
Do	Bolognesi	Ocros	2		
Lima	Chancay	Huacho	1		
Do	do	Huaral	5	2	
Do	Lima	Ciudad	3	1	
Do	do	Haciendas	7	3	
Do	do	Chilca	3	1	
Do	Cañete	Cañete	1		
Ica	Chincha	Chincha	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following table must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended September 17, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
India				June 27–July 10, 1926 Cases, 3,365, deaths, 2,065
Bombay	July 25–31	1	1	
Calcutta	July 11–24	75	64	
Madras	Aug 1–7	1	1	
Rangoon	July 11–24	10	8	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended September 17, 1926—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
China				
Foochow	July 25-31			Present
Egypt				Jan 1-Aug 12, 1926. Cases, 115
Alexandria	July 28-Aug 12	2	1	
Beheira	do	3	1	
Great Britain				
Liverpool	Reported Sept 6		1	Several cases
Hawaii Territory				
Hamakua	June 9			One plague rodent trapped near Hamaqua mill
India				June 27-July 10, 1926 Cases, 420, deaths, 283
Bombay	July 25-31	1	1	
Madras	July 10-17	34	16	
Rangoon	July 11-24	9	4	
Iraq				
Baghdad	July 25-31	1	1	
Japan				
Yokohama	July 2-Aug 10	9	8	
Java				
Batavia	July 17-23	2	2	
Peru				
Huarmey	July 1-31			Present.
Ocros	do	2		
Huacho	do	1		
Huaral	do	5	2	
Lima	do	3	1	
Haciendas	do	7	3	
Chilca	do	3	1	
Cañete	do	1		
Chincha	do	1		
Turkey				
Constantinople	Aug 1-14	2		

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Brazil				
Bahia	July 18-31	17	7	
China				
Foochow	July 25-31			Present.
Egypt	July 23-Aug. 5	54		
Great Britain				
England and Wales				Aug 15-21, 1926 Cases, 62
India				June 27-July 10, 1926. Cases, 6,899, deaths, 2,109.
Bombay	July 25-31	8	7	
Calcutta	July 11-24	5	5	
Karachi	July 25-31	1	1	
Madras	Aug 1-7	12		
Rangoon	July 11-24	2		
Italy				
Catania	Aug 9-15	2		
Jamaica				Aug 15-21, 1926 Cases, 52 (Reported as Alastrim.)
Japan				
Tokyo	July 11-17	1		
Taiwan	July 11-31	1		
Java				
East Java and Madoera	July 4-17	28		
Mexico				
Guadalajara	Aug 24-30		1	
Mexico City	Aug 8-21	2		
Portugal				
Lisbon	July 11-Aug 13	20	5	
Switzerland				
Lucerne Canton	July 1-31	2		
Union of South Africa	June 1-30	8	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended September 17, 1926—Continued

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Egypt				
Cairo	July 23–Aug 5	1		
Great Britain				
Scotland—				
Glasgow	Aug 15–21		1	
Mexico				
Mexico City	Aug 15–21	5		Including municipalities in Federal District.
Palestine	Apr 1–June 30	8	1	
Tiberias	Aug 3–9	1		
Union of South Africa				
Cape Province	June 1–30	49	5	
Orange Free State	do	9	3	
Do	July 18–24			Outbreaks.
Natal	June 1–30	11	1	
Transvaal	do	7	2	

Reports Received from June 26 to September 10, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18–May 29, 1926 Cases, 31, deaths, 29
China:				
Shanghai	Reported July 20	35	8	
Do	July 25–Aug 1	8	189	Cases, foreign, deaths, native and foreign
Swatow	July 11–24		63	
Do	July 25–31	14		
Tsingtao	do		1	
French settlements in India				Mar 7–May 15, 1926 Cases, 19; deaths, 18
India				Apr 25–June 26, 1926. Cases, 18,526, deaths, 11,531
Bombay	May 30–June 5	1	1	
Do	July 18–24	1	1	
Calcutta	Apr 4–May 29	478	418	
Do	June 13–26	73	69	
Do	June 27–July 10	87	82	
Madras	May 16–June 5	2	1	
Rangoon	May 9–June 26	67	44	
Do	June 27–July 10	16	17	
Indo-China				
Saigon	May 2–15	52	48	
Do	May 22–June 26	42	32	
Do	June 27–July 17	27	16	
Japan				
Yokohama	Aug 25	1		
Philippine Islands				
Manila	May 18–24	2	2	
Do	June 27–July 17	4	1	
Provinces—				
Albay	Apr 18–24	1	1	
Mindoro	Feb 21–Mar 6	3	3	
Romblon	Dec 14–31	42	43	
Do	Jan 2–23	16	12	
Siam.				
Bangkok	May 2–June 12	1,325	736	
Do	June 20–26	56	26	
Do	June 27–July 10	54	22	
On vessel·				
Steamship Macedonia	Aug 5	1		At Yokohama, Japan Vessel sailed from Singapore July 18, 1926

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 10, 1926—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21–30	1		Under date of July [illegible], 2 cases reported
Bona	Aug 14	1		
Azores				
Fayal Island—				
Horta	Aug 2–8	1	1	
St Michaels Island	May 9–June 26	7	2	
British East Africa				
Kisumu	May 16–22	1	1	
Uganda	Mar 1–May 31	449	356	
Canary Islands				
Teneriffe	Aug 2	2	*	
Ceylon				
Colombo	May 29–June 5	1	1	
Chile				
Iquique	June 20 26		1	
China				
Amoy	Apr 18–June 26	40	30	
Do	June 27–July 21	21		
Foochow	June 6–July 21			Several cases Not epidemic
Nanking	May 9–July 24			Prevalent
Swatow	July 25–31	14		
Ecuador				
Guayaquil	May 16–June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1–31			Rats taken, 20,166, found infected, 22
Egypt				Jan 1–July 22, 1926 Cases, 104
City—				
Alexandria	July 27	2		
Suez	May 21–July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23–29	2		
Beni Suef	May 23–June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
France				
Marseille	July 8	1	1	Reported July 24
St Denis	Reported Aug 2	1		Vicinity of Paris.
St Ouen	Aug 14	2		Suburb of Paris
Greece				
Athens	Apr 1–May 31	16	4	Including Piraeus.
Patras	May 27–June 12	4	1	
Do	July 25–Aug 7	5	2	
Zante	May 17	1		
Hawaii				
Paauhau	July 18–24			Plague-infected rat trapped
India				Apr 25–June 16, 1926. Cases, 53,001, deaths, 41,576
Bombay	May 2–June 26	16	15	
Do	July 18–24	1	1	
Karachi	May 23–June 26	15	13	
Do	July 11–17	1	1	
Madras Presidency	Apr 25–June 26	162	93	
Do	July 4–24	46	27	
Rangoon	May 9–June 26	20	15	
Do	June 27–July 10	3	4	
Indo-China				
Saigon	May 23–June 26	8	3	
Iraq				
Baghdad	Apr 18–June 12	161	108	
Do	July 18–24	1	1	
Japan				
Yokohama	July 2–30	9	5	
Do	Aug 7	2		Total July 2–Aug. 2, 1926 Cases, 9, deaths, 7
Java				
Batavia	Apr 24–June 19	65	65	
Do	June 26–July 16	25	24	
Cheribon	Apr 11–24	3	3	
East Java and Madoera	June 13–19	1	1	
Madagascar.				
Ambositra Province	May 1–15	4	4	Septicemic
Moramanga Province	Apr 1–15	2	2	Do
Tananarive Province				Apr 1–June 15, 1926: Cases, 120; deaths, 111.
Tamatave (Port)	May 16–31	1	1	
Tananarive Town	Apr 1–May 15	6	6	
Other localities	do	80	77	Bubonic, pneumonic, septicemic.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 10, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Nigeria				Feb 1-Apr 30, 1926 Cases, 115, deaths, 92
Peru				May-June, 1926 Cases, 57, deaths, 16
Departments—				
Ancash	May 1-31			Present
Cajamarca	May 1-June 30	10	4	
Ica	May 1-31	1		
Libertad	do	4		Pacasmayo, cases, 2, Trujillo district, cases, 2
Lima	May 1-June 30	29	12	
Piura	June 1-30	13		In Huancabamba district
Russia				Jan 1-Mar 31, 1926 Cases, 37
Senegal				Nov 1-30, 1926 Cases, 3, deaths, 2 Mar 1-Apr 30, 1926 Cases, 15, deaths, 4
Siam				
Bangkok	May 23-June 26	2	2	
Straits Settlements				
Singapore	May 2-8	1	1	
Syria				
Beirut	July 1-10	1		
Tunisia	May 11-June 20	150		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-July 3	1		
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District—				
Protestpan	May 9-22	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	14		
Do	July 1-10	1		
Belgium				
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Brazil				
Bahia	June 20-26	1		
Do	June 27-July 17	2	7	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-July 31	14	8	
Pernambuco	July 11-17	1		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-31	508	235	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Canada				May 30-June 12, 1926 Cases, 46.
Alberta	May 30-June 12	3		
Do	June 27-July 17	1		
British Columbia—				
Vancouver	Aug 16-22	2		
Manitoba	May 30-June 26	24		
Do	June 27-Aug 21	9		
Winnipeg	June 6-12	5	1	
Do	July 4-Aug 28	11		
Ontario				May 30-June 26, 1926 Cases, 36. June 27-Aug 21 Cases, 56
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2	1	
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 10, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Canada—Continued				
Ontario—Continued				
Orillia	Apr 26–May 29	7		
Ottawa	July 18–24	1		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
Saskatchewan				May 30–June 19, 1926 Cases, 16. June 27–Aug 21 Cases, 38
Regina	July 4–10	2		
Ceylon				Mar 14–May 29, 1926 Cases, 44; deaths, 3
Chile				
Antofagasta	June 6–12	1		
China				
Amoy	May 1–June 26	4	8	
Do	July 4–10	1		
Antung	May 17–June 19	5		
Do	July 4–18	2		
Canton	May 1–31	4	2	
Chungking	May 2–July 31			Present
Foochow	May 2–July 14			Do
Hongkong	May 2–June 26	19	10	
Do	June 27–July 3	1	1	
Manchuria	July 4–31	18		Railway stations
An-shan	May 16–June 12	5		South Manchurian Railway
Antung	May 16–June 19	5		
Changchun	May 16–June 26	6		Do
Do	June 27–July 3	1		Do
Dairen	Apr 25–June 20	69	16	
Do	June 28–July 18	3	2	
Fushun	May 16–June 5	4		Do
Harbin	May 14–June 30	21		Do
Do	July 1–28	12		
Kai-yuan	May 16–June 30	10		Do
Kungchuling	June 13–19	1		Do
Liao-yang	May 16–June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16–June 19	4		Do
Ssupingkai	May 16–June 30	2		Do
Teshihchiao	do	2		Do.
Wa-feng-tien	do	3		Do
Nanking	May 8–July 21			Present
Shanghai	May 2–June 26	10	25	Cases Foreign Deaths, population of international concession, foreign and native
Do	June 27–July 24	3	3	
Swatow	May 9–July 31			Sporadic.
Tientsin	June 2–26		1	Reported by British municipality
Wanshien	May 1			Prevalent.
Chosen				Mar 1–Apr 30, 1926 Cases, 368; deaths, 85
Fusan	May 1–31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15–July 1	18	3	
Cairo	Jan 29–Feb 4	1	1	
Esthonia				May 1–June 30, 1926 Cases, 3.
France				Mar 1–Apr 30, 1926 Cases, 92
St Etienne	Apr 18–June 15	7	3	
French Settlements in India	Mar 7–May 15	205	205	
Gold Coast	Mar 1–Apr 30	626	13	
Great Britain				
England and Wales				May 23–July 3, 1926 Cases, 1,068, July 4–Aug 14, 1926, Cases, 510
Bradford	May 23–29	1		
Newcastle-on-Tyne	June 6–12	1		
Do	July 11–17	1		
Nottingham	May 2–June 5	7		
Sheffield	June 13–19	1		
Do	July 4–Aug 7	2		
Greece				
Saloniki	June 1–14		3	
Guatemala				
Guatemala City	June 1–30		2	
India				Apr 25–June 26, 1926. Cases, 54,851, deaths, 14,771.
Bombay	May 2–June 26	220	134	
Do	June 27–July 24	70	34	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 10, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
India—Continued				
Calcutta	Apr 4–May 29	171	152	
Do	June 13–26	24	18	
Do	June 27–July 10	13	12	
Karachi	May 16–June 26	44	18	
Do	June 27–July 24	8	4	
Madras	May 16–June 26	7	4	
Do	June 27–July 31	9	4	
Rangoon	May 9–June 26	10	5	
Do	July 4–10	1		
Indo-China				
Saigon	do	2		
Iraq				
Baghdad	May 9–June 26	8	3	
Do	July 4–10	1	1	
Basra	Apr 18–June 22	34	25	
Italy				Mar 28–June 5, 1926 Cases, 26.
Rome	June 14–20	4		Entire consular district, including Island of Sardinia
Jamaica				Apr 25–June 26, 1926: Cases, 201. (Reported as alastrim)
Do	June 27–July 31			June 27–July 31, 1926 Cases, 85 (Reported as alastrim)
Japan				Apr. 11–May 29, 1926 Cases, 564.
Kobe	May 30–June 5	1		
Nagoya	May 16–22		1	
Do	July 4–10	1		
Taiwan Island	May 11–20	24		
Do	June 1–20	23		
Tokyo	June 26–July 3	2		
Yokohama	May 2–8	2		
Java				
Batavia	May 15–June 25	2		Province.
East Java and Madoera	Apr 11–July 3	100	6	
Malang	Apr 4–10	6	1	Interior.
Surabaya	May 16–22	14	1	
Latvia				Apr 1–30, 1926 Cases, 3.
Mexico				Feb 1–Mar 31, 1926: Deaths, 602.
Aguascalientes	June 13–26		5	
Guadalajara	June 8–14		2	
Do	June 29–Aug 16		5	
Mexico City	May 16–June 5	3		Including municipalities in Federal District
Do	July 25–31	1		Do
Saltillo	July 18–24		1	
San Antonio de Arenales	Jan. 1–June 30			Present 100 miles from Chihuahua.
San Luis Potosi	June 13–26		7	
Do	July 4–Aug 14		9	
Tampico	June 1–10		2	
Torreon	May 1–June 30		17	
Do	July 1–31		5	
Netherlands:				
Amsterdam	July 18–24		9	
Nigeria				Feb. 1–Apr 30, 1926. Cases, 404; deaths, 33.
Persia.				
Teheran	Apr 21–May 21		7	
Peru				
Arequipa	June 1–30		1	
Poland				Mar 28–May 31, 1926: Cases, 12; deaths, 1.
Portugal:				
Lisbon	Apr 26–June 19	10	3	
Oporto	May 23–June 5	4		
Do	July 11–24	2		
Russia				Jan. 1–Mar 31, 1926. Cases, 2,103.
Siam:				
Bangkok	May 2–June 12	23	20	
Do	July 4–17	24	23	
Straits Settlements				
Singapore	Apr 25–May 1	1		
Switzerland				
Lucerne Canton	June 1–30	1		
Tunisia				Apr 1–June 30, 1926: Cases, 17.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 10, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				
Cape Province	June 20-26			Outbreaks
Idutya district	May 23-29			Do
Orange Free State	June 20-July 3			Do
Natal	May 30-June 5			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Johannesburg	May 9-June 12	5		
Do	July 11-17	1		
Yugoslavia				Apr 15-30, 1926 Cases, 2, deaths, 1
On vessel				Three cases, 1 death, at Aden, Arabia, stated to have been imported by sea
S S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed At Durban, Union of South Africa, June 16, 1926 One suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Argentina				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Bulgaria				Mar 1-Apr 30, 1926 Cases, 64, deaths, 12
Chile:				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Valparaiso	Apr 29-May 5		1	
China				
Antung	June 14-27	7	1	
Do	June 28-Aug. 1	17	1	
Canton	May 1-31	1		
Ichang			1	Reported May 1, 1926. Occurring among troops.
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district.
Chosen				Feb 1-Apr 30, 1926: Cases, 640; deaths, 66
Chemulpo	May 1-June 30	38	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Czechoslovakia				Jan 1-May 31, 1926 Cases, 154; deaths, 4.
Egypt:				
Alexandria	July 16-22	1		
Port Said	June 4-24	4	1	
Do	July 9-15	3	1	
Cairo	Jan 29-Feb 25	55	11	
Great Britain.				
Scotland—				
Glasgow	July 30-Aug. 7	9		In same family.
Ireland (Irish Free State):				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerry County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-May 8, 1926 Cases, 3
Japan				Mar 28-May 29, 1926: Cases, 37.
Latvia				May 1-June 30, 1926 Cases, 19
Lithuania				Mar 1-May 31, 1926 Cases, 172, deaths, 21.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 10, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Mexico				Feb 1-Mar 31, 1926 Deaths, 73
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal District.
Do	June 13-19	9		Do.
Do	July 25-31	3		Do.
San Luis Potosi	June 13-26			Present, city and country.
Morocco				Mar 1-May 31, 1926 Cases, 414.
Palestine				March, 1926 Cases, 6 Exclusive of Bedouin tribes and the British military forces
Gaza	July 6-12	1		
Haifa	July 13-19	1		
Jaffa District	June 15-28	5		
Majdal District	July 13-Aug 2	2		
Nazareth District	do	3		
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85
Rumania				Mar 1-Apr 30, 1926 Cases, 395, deaths, 49
Russia				Jan 1-Mar 31, 1926 Cases, 11,814
Tunisia				Apr 1-June 30, 1926 Cases, 110
Tunis	June 11-30	3		
Turkey:				
Constantinople	June 16-22	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths, 19
Cape Province				Apr 1-May 31, 1926 Cases, 116, deaths, 15 Native
Do	May 31-July 3			Outbreaks
Glengray District	June 27-July 3			Do
Grahamstown	do	1		Sporadic
Natal				Apr 1-May 31, 1926 Cases, 17. Native
Orange Free State				Apr 1-May 31, 1926 Cases, 15, deaths, 1
Do	June 6-12			Outbreaks
Transvaal				Apr 1-30, 1926 Cases, 3, deaths, 3 Native
Walkkerstroom district	June 20-26			Outbreaks
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 48, deaths, 7 July 1-31, 1926 Cases, 2, deaths, 1.
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 25			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr 1-10	3	1	

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SPECIAL ARTICLES

Public Health Provisions in State Constitutions
Study of Illness in a General Population Group

WASHINGTON
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1926

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen B J LLOYD, *Chief of Division*

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PUBLIC HEALTH REPORTS

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PUBLIC HEALTH IN STATE CONSTITUTIONS

By JAMES A. TOBEY, Lecturer on Public Health Law, Massachusetts Institute of Technology, Cambridge, Mass.

Provisions pertaining to public health may now be found in the existing constitutions of 9 of our 48 States. In most instances these sections require the legislature to establish a State board of health, though a few deal with the powers of the legislature regarding local health administration. In only one case, that of Texas, is the creation of the State board of health (and vital statistics) by the legislature made permissive and not mandatory. In a few States there are also provisions in the constitutions concerning the practice of medicine.

A State constitution is the supreme law of the State, subject only to such legal limitations as may be expressed or implied in the Federal Constitution, which enumerates the powers which have been granted to the National Government. The State constitution is more in the nature of a limitation of powers, because all things not denied in this instrument may be performed by the State, and all matters required therein must be done by the State, or by the citizens thereof, as the case may be.

The care of the public health is, under our form of government, entrusted primarily to each of the individual States, which is supreme so far as the health of its own people is concerned. This duty forms a part of the police power of the State, a power possessed before the National Government was formed and not relinquished to the United States then or subsequently. It is, in fact, the inherent responsibility of the State to promote and protect the health of its inhabitants, a duty which can not be refused or given up. This is so whether there are health provisions in a State constitution or not.

Public health need not be specifically mentioned in a State constitution in order to give the State power over this important function of government. It is useful, however, to require in this document that a State health organization be created, or to set forth in general terms the duties of the legislature with respect to public health. From the standpoint of government it is questionable policy for the State constitution to go into details as to administrative procedure in this connection. Such details will, moreover, be found in only one State constitution, that of Louisiana, where the composition of the

State board of health is presented in a most minute manner. Such matters should be left to the discretion of the law-making body of the State, the legislature; for, with the advancement of science, it may be found expedient to change the type of organization from time to time. A statute may be altered much more readily than may a constitution It is, of course, the privilege of the people to place administrative details in their organic law, but it is a poor principle, nevertheless.

In the following pages will be given those portions of the nine State constitutions which have to do with the public health. There are, obviously, many other parts of State constitutions which affect public health, either directly or indirectly Thus in Georgia it was recently held by the supreme court of that State that, although the constitution authorizes the collection of county taxes for "necessary sanitation," a State law permitting taxation to pay registrars of vital statistics fees for such statistics is unconstitutional, as "necessary sanitation" does not include the collection of such statistics.[1]

In the quotations from the State constitutions given below it will be noted that in only three instances do the particular articles of the respective constitutions bear the title of "Health" or "Public Health" In all other instances the health provisions are contained under other sections of the constitutions, such as those referring to "Legislative department," "Administrative officers and boards," "Municipal corporations and police regulations," "General provisions," or "Miscellaneous" The most succinct statement is given in the California constitution, while the longest and most detailed statement appears in the constitution of Louisiana. The State board of health is the subject of provisions in the constitutions of California, Delaware, Florida, Louisiana, Oklahoma, Texas, and Washington; county (or parish) boards are dealt with in those of Florida and Louisiana; and local boards of health are mentioned in the constitutions of Delaware, Louisiana, and South Carolina, the last named not dealing with State organization at all. In each of these last three States the local health authorities are stated to be subordinate to the State officials. The practice of medicine is the subject of provisions in the constitutions of Louisiana, Texas, and Washington The health section in the Wyoming constitution is the most general in scope. It is also worth noticing that while the Oklahoma constitution requires the creation by the legislature of a State board of health the legislature has actually set up an organization consisting of a single commissioner in charge of a department of health.[2]

[1] Smith vs State, 129 S E. 542. [2] Comp L of 1909, sec 340

CALIFORNIA

Constitution of 1879, Article XX (Miscellaneous)

Section 14 The legislature shall provide by law for the maintenance and efficiency of a State board of health.

DELAWARE

Constitution of 1897, Article XII (Health)

The general assembly shall provide for the establishment and maintenance of a State board of health, which shall have supervision of all matters relating to public health, with such powers and duties as may be prescribed by law; and also for the establishment and maintenance of such local boards of health as may be necessary, to be under the supervision of the State board, to such extent and with such powers as may be prescribed by law.

FLORIDA

Constitution of 1885, Article XV (Public Health)

Section 1· The legislature shall establish a State board of health and also county boards of health in all counties where it may be necessary

Section 2 The State board of health shall have supervision of all matters relating to public health, with such duties, powers, and responsibilities as may be prescribed by law [5]

Section 3 The county boards of health shall have such powers and be under the supervision of the State board to such extent as the legislature may prescribe.

LOUISIANA

Constitution of 1921, Article VI (Administrative Officers and Boards)

Section 11 The legislature shall create for the State and for each parish and municipality therein boards of health and shall define their duties and prescribe their powers The parish and municipal boards of health shall be subordinate to the State board of health. The State board of health shall be composed of a president, who shall be designated as State health officer, and eight members, one from each congressional district as at present constituted, five of which members shall be duly qualified and registered physicians, and the three others shall have such qualifications as shall be prescribed by the legislature The governor shall, by and with the advice and consent of the senate, appoint the president and members of the State board of health

Section 12 The legislature shall provide for the interest of State medicine in all of its departments, for the protection of the people from unqualified practitioners of medicine, dentistry, veterinary medicine, and pharmacy; for protecting confidential communications made to practitioners of medicine and dentistry and druggists by their patients and clients while under professional treatment and for the purpose of such treatment; for the protection of the people against the sale, barter, gift, and use of injurious or adulterated drugs, foods, and drinks, and against any and all misbranding and adulteration of the general necessaries of life of whatever kind or character [4]

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[5] It has been held in Logan v Childs (51 Fla 233, 41 So 197) that this section has no application when the board declines to interfere with a municipal ordinance.

[4] Article 296 of the 1913 constitution had the following provision.

"The general assembly shall create for the State and for each parish and municipality therein boards of health, and shall define their duties and prescribe the powers thereof The State board of health shall be composed of representative physicians from the various sections of the State "

OKLAHOMA

Constitution of 1907, Article V (Legislative Department)

Section 39 The legislature shall create a board of health, board of dentistry, board of pharmacy, and pure food commission, and prescribe the duties of each. All physicians, dentists, and pharmacists now legally registered and practicing in Oklahoma and Indian Territory shall be eligible to registration in the State of Oklahoma without examination or cost.

SOUTH CAROLINA

Constitution of 1895, Article VIII (Municipal Corporations and Police Regulations)

Section 10· Boards of health It shall be the duty of the general assembly to create boards of health wherever they may be necessary, giving them the power and authority to make such regulations as shall protect the health of the community and abate nuisances.

TEXAS

Constitution of 1876, Article XVI (General Provisions)

Section 31: The legislature may pass laws prescribing the qualifications of practitioners of medicine in this State and providing for the punishment of persons for malpractice, but no preference shall ever be given by law to any schools of medicine.

Section 32: The legislature may provide by law for the establishment of a board of health and vital statistics, under such rules and regulations as it may deem proper

WASHINGTON

Constitution of 1889, Article XX (Public Health and Vital Statistics)

State board of health: 1 There shall be established by law a State board of health and a bureau of vital statistics in connection therewith, with such powers as the legislature may direct

Medicine and surgery. 2. The legislature shall enact laws to regulate the practice of medicine and surgery and the sale of drugs and medicines.

Same, Article II (Legislative Department)

Section 35· The legislature shall pass necessary laws for the protection of persons working in mines, factories, and other employments dangerous to life or deleterious to health; and fix pains and penalties for the enforcement of same.

WYOMING

Constitution of 1889, Article VII (Education)

Section 20: As the health and morality of the people are essential to their well being, and to the peace and permanence of the State, it shall be the duty of the legislature to protect and promote these vital interests by such measures for the encouragement of temperance and virtue, and such restrictions upon vice and immorality of every sort, as are deemed necessary to the public welfare.

A STUDY OF ILLNESS IN A GENERAL POPULATION GROUP[1]

Hagerstown Morbidity Studies No. I: The Method of Study and General Results

By EDGAR SYDENSTRICKER, Statistician, United States Public Health Service

In a previous paper a report was given of the general results of a morbidity study in Hagerstown, Md[2] These results were provisional, since they were based on a preliminary tabulation.

In the present communication a more precise and complete statement is made of—

1. The scope of the study and the method of observation;
2. The general character of the results obtained,
3. The procedure employed in classifying illnesses according to cause,

And some of the general results are given of a final tabulation of the data collected, including—

1. The incidence of illness and the causes thereof as observed over a period of 28 months;
2. The incidence of certain *acute diseases* in so far as they were observed, whether they were the sole cause or were complicating conditions or sequelæ of a given illness,
3. The proportion of *persons* among whom certain diseases or conditions were incident or prevalent during the period

In later papers it is planned to present other phases of the study.

SCOPE OF THE STUDY AND METHOD OF OBSERVATION

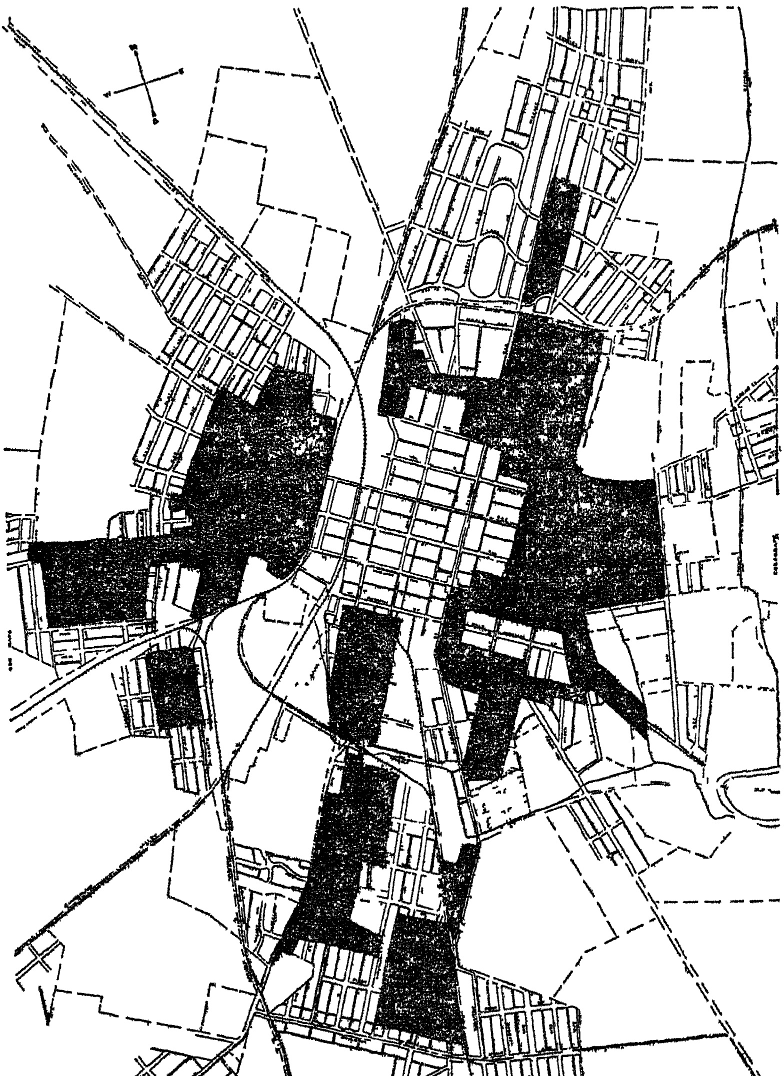
A brief description of the scope and method of the study was given in the preliminary report, but for the sake of completeness and greater precision, as well as to afford the opportunity of making certain addenda, this description is somewhat revised and amplified here.

Location of study.—The city of Hagerstown was selected for this study partly because certain facilities were already afforded by the location there of a health demonstration and partly because it was a fairly typical small city in that part of the eastern section of the country which had not been influenced greatly by recent immigration At the time when the study was made Hagerstown had a population of about 30,000 (29,878 estimated as of February 1, 1923, the mid-date of the period of observation) In 1920, 93 per cent of its population were native white and 88 per cent were native white of native parents. The foreign born comprised less than 2 per cent, and 5 per cent were colored. Of the total population 10 years of

[1] From the Office of Statistical Investigations, United States Public Health Service.

[2] The Incidence of Illness in a General Population Group. Pub Health Rep. Feb 13, 1925, 40, 279-291. (Reprint No 989)

age and over, only 3 per cent were classed illiterate, and of the native white of the same ages only 2 per cent were classed as illiterate. No large or predominant industry is located in Hagerstown, the chief industries being those incident to the requirements of the surrounding



Plat of Hagerstown showing scattered areas in which the population was observed for incidence of illness from Dec 1, 1921, to Mar 31, 1924, by U S Public Health Service investigators

area—retail and wholesale trade, a number of small factories, and transportation. Among the wage-earning group, railroad work probably predominates, the shops of the Western Maryland Railway being situated there.

Scope—The study was planned to include between 1,500 and 2,000 families, and the sections of the city in which the observations were to be made were selected upon two grounds, namely, (1) representativeness of different economic classes, and (2) convenience for repeated visiting The accompanying plat of the incorporated city shows the sections selected Only white persons were included, since the number of negroes was too small to yield comparable results.

In the final tabulation of the results the observations made in 1,815 households were included These households contained 8,587 persons for whom morbidity information at one or more canvasses was secured The actual number of households visited was somewhat larger, the discarded households being of two kinds—those which moved away from the city or to some section of the city inconvenient for the field assistants to visit and those from which only unsatisfactory information could be secured. The proportion of the latter was small; in fact, the cooperation given by the families of all economic classes was very satisfactory and gratifying. As will be explained later, the data approximate a continuous record for 28 months. A certain amount of change necessarily occurs in an ordinary population of this size, however. As stated above, 8,587 persons were included in the study, but the maximum population in any one month was 7,572. Obviously, births and deaths affected the population, and sons and daughters were married, sometimes living with a parent temporarily and later leaving the household for some part of the city not being canvassed. Occasionally no one could be found at home or the family was away on a vacation for a month or two in the summer. The following table shows, however, that 90 per cent of the persons were observed for one year and 50 per cent for 26 of the possible 28 months.

Per cent of persons observed for specified number of months in the Hagerstown morbidity study

Months under observation	Persons under observation specified number of months	
	Number	Per cent of total
28 months	3,202	37 3
26 months or more	5,140	49 8
24 months or more	5,787	67 4
18 months or more	6,824	79 5
14 months or more	7,528	87 7
12 months or more	7,794	90 8
9 months or more	8,085	94 2
6 months or more	8,340	97 1
4 months or more	8,431	98 2

When the number of persons born or dying in the household which was observed 26 months or more is added we find that 63 per cent of the total persons of record were in the population classed as "Under observation 26 months or more".

If we express this total "exposure" in terms of persons for one year our population consists of 16,517 "years of exposure," of which 8,001 were for males and 8,516 for females This is the *numerical* equivalent of a population of 7,079 persons observed continuously for 28 months, or an average monthly population of the same size.[3]

Sex and age distribution of the population —In selecting the population for study, persons living in families were chosen; and in selecting the families for study, some preference was given to those with children. As a result, the observed population has a greater percentage of children under 15 years of age and slightly fewer young adults from 20 to 35 years of age than the entire city. The percentage distribution of the observed population is compared with the total Hagerstown population in the table below:

Percentage distribution of Hagerstown population and of the observed population

Age group	Hagerstown, census of 1920	Observed population 1921–1924	Difference + or −
Total	100 0	100.0	
0–4	10 7	11 0	+0 3
5–9	10 2	13 0	+2 8
10–14	8 7	10 6	+2 1
15–19	8 4	8 6	+0 2
20–24	9 3	7 0	−2 3
25–34	17 9	15 3	−2 6
35–44	13 6	13 5	−0 1
45–64	16.3	16 0	−0.3
65 and over	4 8	5 0	+0 2

These differences are not great enough to prevent the observed population from being typical of the whole, an indication not without interest in itself since it suggests that in a city of this type there is a comparatively small number of unattached persons, and that family groups constitute almost the entire population. The differences shown in the table are so slight that if the total illness rate for persons of known age in the observed population is adjusted according to the Hagerstown population the rate is lowered less than 3 per cent. In fact, if we adjust the rate for sex and age to the population of the United States it becomes 1054 per 1,000 as against a crude rate of 1081, a difference of only 2 per cent.

Method.—The method of observation and recording the results may be described briefly as follows:

[3] This figure is somewhat smaller than that (7,200) used in the preliminary report because of the discarding of some families, as explained above.

(1) A preliminary house-to-house survey was made by members of the staff of the Office of Statistical Investigations in November, 1921, in the several sections selected, in the course of which the population of these sections was enumerated and records were made (*a*) for each individual, relating to color, sex, and age, past occurrence of certain contagious diseases and present acute or chronic diseases or ailment, and (*b*) for each household relating to its general economic status, sanitary condition, method of excreta disposal, and water and milk supplies.

(2) This survey was followed by a series of 16 canvasses, each household being visited by a trained field assistant at intervals of from six to eight weeks At each visit a history of the incidence of sickness in the family since the preceding visit, with a statement of the date of onset, duration, extent of disabling effects, and attendance of physician, was obtained from a relatively responsible informant, usually the housewife

(3) In addition, other sources of information were regularly and systematically utilized in obtaining the record of disease prevalence, as follows: (*a*) Weekly records of absence from school, specifying the nature of the illness whenever illness was the cause so far as the teacher could ascertain it; (*b*) reports of all cases treated in the various clinics maintained in conjunction with the Washington County Health Demonstration, all of the clinics being participated in by local physicians; (*c*) reports of notifiable diseases from practicing physicians; (*d*) reports of district nurses; (*e*) data collected in field investigations of child hygiene by the United States Public Health Service in cooperation with the Washington County Health Demonstration.

(4) For all cases attended by physicians the statements made by the informant as to the nature or cause of illness were submitted to the physicians concerned for review and correction.

GENERAL DISCUSSION OF THE NATURE OF THE RESULTS OBTAINED

As it was pointed out in the preliminary report, the result of these canvasses is not, of course, a complete record of all of the ill health prevalent in this population during the period of observation nor even an accurate statement of the causes of all the attacks of disease which were recorded Such a record was impracticable for so large a population of this kind, and no false hopes of obtaining it were indulged in Furthermore, it must be obvious from clinical experience as well as from considerations of a practical kind that the full extent of ill health and its specific nature can not be ascertained by any one method. Properly conducted physical examinations, supplemented by the necessary laboratory findings, will yield certain indispensable

indications of the existence and the net results of various diseases and conditions, but they will not tell the whole story. A carefully obtained history, for each individual, of previous health, incidence of disease, occurrence of various symptoms, and exposure to certain possibly relevant conditions will add to the picture Of undoubted importance is a period of observation during which the reactions of the individual under ordinary as well as specific circumstances are recorded; this record may be of the occurrence of various symptoms and of the extent to which the subject is affected-- whether only slightly ill, or more or less continuously "below par," or unable to engage in his usual activities, or disabled for long periods, or dying The detail and accuracy with which these observations are made depend, naturally, upon the means employed.

Our study was of the nature of the third method mentioned above, namely, *a series of observations which was directed as specifically as possible to the illnesses which occurred among a population during the period chosen.*

Now, it is evident that the length of interval between inquiries is one important determinant of *how much* sickness and what kinds of sickness will be recorded A weekly inquiry will elicit information on more slight ailments than a monthly inquiry, and an inquiry made every six or eight weeks will fail to obtain information on many ailments of very short duration or of several days' duration but accompanied only by slight discomfort. From previous experience in sickness surveys and continuous morbidity records and disability records of industrial employees we were led to believe that the intervals between visits chosen for the present study would probably yield a fairly accurate record of *real illnesses.*

As a matter of fact, less than 5 per cent of the illnesses of exactly stated durations recorded in our study were one day or less in duration. Nearly 80 per cent were three days or longer, and 60 per cent were eight days or longer in duration [4] Approximately 40 per cent were not only disabling but caused confinement to bed. It is evident, therefore, that in the main the illnesses recorded were more than trivial in their character, in spite of the fact that in some instances mere symptoms were given as diagnoses The incidence of acute attacks of specific and generally recognizable diseases has been, we feel, recorded with a satisfactory degree of completeness. On the other hand, the incidence of mild attacks, as, for example, of coryza, and of slight disorders and even of serious conditions when such conditions were not accompanied by noticeable symptoms, is probably incomplete and in many instances inaccurate in spite of the fact

[4] The results of this study relating to duration of cases of illnesses will be presented and discussed in a later paper

that a record of 28 months was obtained for the same individuals. Cases attended by physicians may be said to be quite complete.[5]

The question properly may be asked: Exactly what is meant by "illness"? The question is hard to answer with a precise definition. In the first place, the records of "illness" obtained in this study were of illnesses as reported by the household informant (usually the wife) either as experienced by herself or as she observed them in her family, the definition of the term thus can not be refined any further than the common understanding of the word In the second place, the records as obtained were of *attacks* rather than illness in the sense of ill health As will appear later, of those persons affected with some chronic condition, only those who suffered ill effects of this condition *during the period* were recorded as having this condition. It is undoubtedly true that had we employed this method of study over a period longer than 28 months more conditions of this nature would have been brought to light, since the factor of time is a fundamental one in recording and interpreting morbidity. At the same time it must be evident that there is a period beyond which additional observation of this kind will not yield much additional information, when, for practical purposes, the "law of diminishing returns" renders further expenditure of effort and patience unprofitable for the purpose in mind.

The reader is cautioned against putting too fine a point on the definition of illness as recorded in this series of observations. Perhaps it is sufficient simply to bear in mind that the chief aim of the study was a record of illnesses, as ordinarily understood, that were experienced by a population group composed of persons of all ages and both sexes, and in no remarkable respect unusual. This record, the first of its kind so far as we are aware, was regarded as desirable in order to give a picture of the sickness *incidence* in a general population group over a sufficiently long period of time to distinguish it from sickness prevalence as ascertained at a given instant in time by the cross-section method.

CLASSIFICATION OF ILLNESSES ACCORDING TO CAUSE

When the stage of classifying the illnesses according to cause was reached in the course of this study it was brought home to us that while a little knowledge is a dangerous thing the task of dealing with a little more knowledge was a very puzzling and troublesome thing. The chief difficulty lay in the selection of the primary cause of illness when several possible causes were observed. This difficulty has

[5] During the same period in which this study was made every absence of school children in Hagerstown was recorded, with such information relating to cause of absence as could be secured from the children, parents, and teachers The sickness rates for children in school based upon records obtained in house-to-house visits were compared with the rates based upon school records, with the result that the two rates for sickness lasting three days or longer were almost identical About 50 per cent of sicknesses lasting one day or longer and about 75 per cent of those lasting two days or longer were recorded in the house-to-house canvasses, but a larger proportion of the short-time absences from school were ascribed to "headache" and other symptoms.

been experienced, of course, in dealing with the so-called "joint" causes of death, and a more or less arbitrary statistical procedure has been developed. But in the case of our morbidity records it happened that for many individuals there was a series of observations covering some period of time, and this entire sickness history of an individual frequently had to be considered in determining the primary cause of a particular illness In other words, we were in the position of knowing a good deal more about these individuals than we would learn from the entries ordinarily made on a death certificate There were other difficulties, as well, but in dealing with them all it seemed to us that the primary purpose to be kept in mind was *the immediate cause of each specific illness* The prevalence of any disease or the reason or reasons for the ill health of the individual concerned was regarded as another, although often related, matter, to be determined for another purpose This we tried to do by adhering to the procedure outlined below

1 The term "illness" was rigidly interpreted as "a continuous period of sickness,"[6] regardless of complications, even though in some instances the coincident occurrence of two or more conditions seemed to be a matter of chance. Thus, a person who had grippe, measles, and chicken pox within one continuous period, i e, without a definite statement from the family that some time intervened between the separate conditions, would be credited with only *one illness*. A person with several chronic conditions contributing to a more or less continuous condition of illness was counted as sick only once, and one condition was considered the primary cause and the others contributory causes All respiratory illnesses were carefully edited to see that the same continuous sickness was not counted as two illnesses when due to what seemed to be *successive* or *progressive* conditions Thus a person might report a cold followed by pneumonia; this would be counted only once as pneumonia. Similarly, many combinations of respiratory conditions were reported, such as cold and bronchitis, bronchitis and tonsillitis, tonsillitis and influenza. All were counted as *one illness*, and that condition which, from the obtainable information, was chiefly responsible for this particular illness was considered the sole cause.

2. In the many cases in which more than one cause of an illness or attending condition was recorded the following general rules were followed in selecting the primary cause under which the illness was classified:

(*a*) The *first* cause in order of occurrence, applied largely to acute conditions with common complications, such as influenza and pneumonia, measles and otitis media, scarlet fever and nephritis.

(*b*) *Acute* conditions ordinarily were given preference over an attack of some chronic condition. Thus, in case of gripppe and chronic rheumatism, the grippe was considered primary.

[6] The annual incidence rate determined by our final tabulation was 51 per 1,000 less than in the preliminary tabulation, a difference due primarily to a more rigid conformance to this interpretation.

(c) The condition or disease *most specifically associated with the period of sickness* was preferred over a minor condition which preceded or accompanied it For example, tooth abscess and rheumatism; the latter was made primary. When it was difficult to determine the factual basis, the more serious condition was chosen

(d) The *more specific* cause was given preference over a statement of a symptom

(e) When none of the above rules could be applied, and the history of the individual gave no basis for decision, the condition mentioned first by the informant was made primary The number of such cases was relatively small

Rather frequently the informant mentioned more than one condition in telling about an illness, but when these conditions were in the nature of symptoms which simply amplified the information as regards a single cause of illness they were not tabulated as complications or contributory causes For example, a person may have reported indigestion and a headache as the cause of illness, but only the indigestion was counted. In other words, *symptoms* were not made contributory causes unless it seemed quite certain they represented a condition *separate* and *distinct* from the primary diagnosis. On the other hand, all specific conditions were tabulated, even though they were very frequently complications of the primary disease Thus, in the case of cold and indigestion, the cold was made primary, but the indigestion was tabulated as a complication.

The form of the classification used was the International List of Causes of Death, 1920 Revision. Some departures, dictated by considerations which we believe will be apparent to anyone more interested in the causes of illness than in a mere scheme of classification, were made from it, but in all the tables here presented the International List numbers are carried for definitive purposes.

THE INCIDENCE OF ILLNESSES CLASSIFIED BY CAUSE

The basic data used in this report are presented in Table 1. Here is shown the number of illnesses recorded during the 28 months, classified according to the sole or primary cause The principal specific causes are shown separately and also the totals for groups of diseases according to the International List of 1920 In the last two columns of the table are shown the number of times each disease was reported as a complicating or contributory cause of an illness. Thus if it is desired to know the number of times otitis media was the primary cause of illness the first three columns in Table 1 show that there were 117 illnesses due to this cause, 57 males and 60 females; but the last two columns in the table show that otitis media was present in an additional 19 illnesses of males and 30 illnesses of females, and the sum of the two numbers for males and the two for females gives, therefore, the total number of times otitis media was either a primary cause or a contributory cause of illness.

TABLE 1.—*Number of illnesses in which specified diseases or conditions were the sole or primary cause and the number in which each disease or condition was reported as a contributory cause in a canvassed population group of white persons in Hagerstown, Md., December 1, 1921–March 31, 1924*

Diseases and conditions causing illness (numbers in parentheses refer to those given in the International List of the Causes of Death, 1920)	Number of illnesses in which specified disease was the sole or primary cause			Number of illnesses in which specified disease was a contributory cause	
	Both sexes	Male	Female	Male	Female
Years of life exposed	16,517	8,001	8,516		
All diseases	17,847	7,541	10,306	216	444
Total respiratory (excluding operations) (11, 31, 97–107, 109)	10,844	4,746	6,098	55	77
Influenza and grippe (11)	2,366	1,009	1,357	5	11
Pneumonia (all forms) (100, 101)	111	57	54	18	15
Pleurisy (102)	33	13	20	3	2
Diseases of pharynx (109)	1,085	467	618	2	14
Tonsillitis	470	193	277	1	6
Sore throat	512	223	289		2
Quinsy	50	28	22	1	4
Other diseases of pharynx	53	23	30		2
Diseases of larynx (98)	188	80	108		
Laryngitis	95	25	70		
Croup	88	54	34		
Other diseases of the larynx	5	1	4		
Hay fever and asthma (105, part of 107)	95	33	62	2	3
Tuberculosis, pulmonary (31)	52	16	36		3
Other diseases of respiratory system (including head colds, chest, and bronchial conditions) (97, 99, 103, 107)	6,914	3,071	3,843	25	29
Tonsillectomy, adenoidectomy, or both	120	63	57		
Other operations on throat and nasal fossæ	8	6	2		
Epidemic, endemic, and infectious diseases (1–42, except 11 and 31)	1,448	731	717	9	8
Typhoid (1)	19	6	13		
Measles (7)	565	277	288	2	1
Scarlet fever (8)	34	18	16		
Whooping cough (9)	374	204	170		
Diphtheria (10)	45	21	24		
Chicken pox (25a)	229	138	91	1	2
German measles (25b)	18	7	11		
Tuberculosis, nonpulmonary (32–37)	14	5	9		
Venereal diseases (38–40)	27	6	21		5
Vaccinia (part of 42)	38	18	20		
Other diseases in this group (2–6, 12–24, 26–30, 41, and part of 42)	85	31	54	6	
General diseases (43–69)	359	113	246	6	16
Cancer (43–49)	22	3	19		
Rheumatism, acute and chronic (51, 52)	275	89	186	3	12
Diabetes (57)	15	2	13	1	
Exophthalmic goiter (60a)	9	1	8		
Other general diseases (50, 53-56, 58, 59, 60b,[1] 61–69)	38	18	20	2	4
Diseases of the nervous system (70–84, part of 205)	728	168	560	18	56
Cerebral hemorrhage and apoplexy (74)	11	2	9	3	1
Paralysis (75)	25	9	16		2
Epilepsy (78)	10	8	2	1	
Chorea (81)	20	4	16		
Neuralgia (part of 82)	101	20	81	5	15
Neuritis and sciatica (part of 82)	87	19	68	2	6
Headache (part of 82 and 205)	249	64	185		2
Neurasthenia (part of 84)	181	23	158	6	29
Other nervous diseases (71–73, 76, 77, 79–80, 83, part of 82, 84)	44	19	25	1	1
Diseases of the eyes and annexa (85)	123	71	52	2	14
Diseases of ears and mastoid process (86)	180	81	99	25	43
Otitis media	117	57	60	19	30
Mastoiditis	10	7	3		1
Other and unqualified diseases of the ear	53	17	36	6	12
Diseases of circulatory system (87–96)	303	113	190	34	60
Diseases of the heart (87–90)	166	51	115	17	39
Arteriosclerosis (part of 91)	20	11	9	6	6
Hemorrhoids (part of 93)	18	9	9		
High blood pressure (part of 96)	19	4	15	3	8
Adenitis (part of 94)	44	21	23	7	6
Other diseases of circulatory system (91, 95, part of 91, 93, 94, and 96)	36	17	19	1	1

[1] Includes simple goiter only when it caused some illness in the period.

TABLE 1.—*Number of illnesses in which specified diseases or conditions were the sole or primary cause and the number in which each disease or condition was reported as a contributory cause in a canvassed population group of white persons in Hagerstown, Md., December 1, 1921–March 31, 1924*—Continued

Diseases and conditions causing illness (numbers in parentheses refer to those given in the International List of the Causes of Death, 1920)	Number of illnesses in which specified disease was the sole or primary cause			Number of illnesses in which specified disease was a contributory cause	
	Both sexes	Male	Female	Male	Female
Years of life exposed	16,517	8,001	8,516		
Diseases and disorders of the digestive system (110–127, part of 108 and 205)	1,594	645	949	24	67
Ulcers of stomach and duodenum (111)	11	10	1		1
Indigestion and upset stomach (112)	716	313	403	8	15
Biliousness (part of 205)	156	54	102	4	12
Stomach trouble, unqualified (112)	125	56	69	3	9
Diarrhea −2 years (113)	75	36	39	2	2
Diarrhea +2 years (114)	136	58	78		4
Appendicitis (117)	85	26	59		14
Hernia (118a)	27	18	9		
Intestinal disorders, including constipation (118b, 119)	37	13	24	2	
Biliary calculi (123)	69	11	58		3
Cholecystitis (part of 124)	30	3	27		2
Jaundice (part of 124)	45	18	27		
Other diseases of liver (part of 124)	28	7	21	2	1
Other diseases of digestive system (110, 116, 126, and 108, excluding teeth and gums)	54	22	32	3	4
Diseases of teeth and gums (part of 108)	124	47	77	3	9
Diseases of kidney and annexa (128–134)	182	57	125	20	35
Acute nephritis (128)	9	3	6	3	2
Chronic nephritis (129)	43	16	27	9	17
Other and unqualified kidney trouble (131)	73	17	56	7	11
Cystitis and bladder trouble (unqualified) (133)	41	14	27	1	5
Other diseases in this group (132, 134)	16	7	9		
Nonvenereal diseases of genito-urinary system (135–142)	183	9	174	3	29
Diseases of male organs (135–136)	9	9		3	
Diseases of female genital organs (137–139, part of 141, 142)	99		99		11
Menstruation (part of 141)	48		48		4
Menopause (part of 141)	27		27		14
Puerperal state (143–150)	395		395		7
Abortion and stillbirth (part of 143)	33		33		
Confinements	324		324		
Other puerperal conditions (143–150)	38		38		7
Diseases of skin and cellular tissue (151–154, part of 205) [2]	291	165	126	14	16
Furuncle (152)	71	54	17	2	4
Abscess (153)	27	11	16	1	3
Impetigo contagiosa (part of 154)	24	12	12	1	
Scabies and itch (part of 154)	23	15	8	1	
Other and unqualified skin conditions (part of 154 and 205) [2]	146	73	73	9	9
Disease of bone and organs of locomotion (155–158, part of 205)	111	44	67	2	3
Lumbago, myalgia, and myositis (158)	49	26	23	2	1
Backache (part of 205)	37	7	30		1
Other diseases of bone or organs of locomotion (155, 156, part of 158)	25	11	14		1
Congenital malformations and infancy (159–163)	19	5	14		
Senility (164)	14	6	8		
External causes (165–203)	653	397	256	1	2
All poisonings (175, 176, 177)	46	28	18		
Burns (178–179)	35	19	16		
Fractures, wounds, injuries (ind.) (183–188, 201, 202)	116	113	3	1	
Fractures, wounds, injuries (nonind.) (183–188, 201, 202)	373	177	196		2
Fractures, wounds, injuries (not stated) (183–188, 201, 202)	51	43	8		
Other external causes (165–174, 181–182, 189, 190–196)	32	17	15		
Ill-defined and unknown	168	74	94		2

[2] Includes rash, hives, and sores on body.

From the point of view of the frequency of illness from various causes, the rate per 1,000 persons is a much more comprehensible term, although as a single expression it can not afford the detail given in Table 1. In Table 2, therefore, is shown the annual illness

rate based upon our 28 months' experience It should be observed that this rate is computed in all instances by dividing the number of cases recorded by the "years of exposure."

TABLE 2.—*Morbidity from groups of causes and from certain specified diseases in canvassed population group of white persons of Hagerstown, Md, December 1, 1921–March 31, 1924*

Diseases and conditions causing illness (numbers in parentheses refer to those given in the International List of Causes of Death, 1920)	Annual rate per 1,000 persons observed		
	Both sexes	Male	Female
All causes	1,080.5	942.5	1,210.2
Total respiratory (excluding operations) (11, 97–107, 109, 31)	656.5	593.2	716.1
Influenza and grippe (11)	143.2	126.1	159.3
Pneumonia (all forms) (100, 101)	6.7	7.1	6.3
Pleurisy (102)	2.0	1.6	2.3
Diseases of pharynx (109)	65.7	58.4	72.6
Tonsillitis	28.5	24.1	32.5
Sore throat	31.0	27.9	33.9
Quinsy	3.0	3.5	2.6
Other diseases of pharynx	3.2	2.9	3.5
Diseases of larynx (98)	11.4	10.0	12.7
Laryngitis	5.8	3.1	8.2
Croup	5.3	6.7	4.0
Other diseases of larynx	.3	.1	.5
Hay fever and asthma (105, part of 107)	5.8	4.1	7.3
Tuberculosis, pulmonary (31)	3.1	2.0	4.2
Other diseases of respiratory system (including head colds, chest and bronchial conditions) (97, 99, 103, 107)	418.6	383.8	451.3
Tonsillectomy, adenoidectomy, or both	7.3	7.9	6.7
Other operations on throat and nasal fossæ	.5	.7	.2
Epidemic, endemic, and infectious diseases (1–42, except 11 and 31)	87.7	91.4	84.2
Typhoid (1)	1.2	.7	1.5
Measles (7)	34.2	34.6	33.8
Scarlet fever (8)	2.1	2.2	1.9
Whooping cough (9)	22.6	25.5	20.0
Diphtheria (10)	2.7	2.6	2.8
Chicken pox (25a)	13.9	17.2	10.7
German measles (25b)	1.1	.9	1.3
Tuberculosis, nonpulmonary (32–37)	.8	.6	1.1
Venereal diseases (38, 40)	1.6	.7	2.5
Vaccinia (part of 42)	2.3	2.2	2.3
Other diseases in this group (2–6, 12–24, 26–30, and part of 42)	5.1	3.9	6.3
General diseases (43–69)	21.7	14.1	28.9
Cancer, all forms (43–49)	1.3	.4	2.2
Rheumatism, acute and chronic (51, 52)	16.6	11.1	21.8
Diabetes (57)	.9	.2	1.5
Exophthalmic goiter (60a)	.5	.1	.9
Other general diseases (50, 53–56, 58, 59, 60b,[1] 61–65, 67–69)	2.3	2.2	2.3
Diseases of the nervous system (70–84, part of 205)	44.1	21.0	65.8
Cerebral hemorrhage and apoplexy (74)	.7	.2	1.1
Paralysis (75)	1.5	1.1	1.9
Epilepsy (78)	.6	1.0	.2
Chorea (81)	1.2	.5	1.9
Neuralgia (part of 82)	6.1	2.5	9.5
Neuritis and sciatica (part of 82)	5.3	2.4	8.0
Headache (part of 82, part of 205)	15.1	8.0	21.7
Neurasthenia (part of 84)	11.0	2.9	18.6
Other nervous diseases (71–73, 76–77, 79, 80, 83, part of 82, part of 84)	2.7	2.4	2.9
Diseases of eye and annexa (85)	7.4	8.9	6.1
Diseases of ear and mastoid process (86)	10.9	10.1	11.6
Otitis media	7.1	7.1	7.0
Mastoiditis	.6	.9	.4
Other and unqualified diseases of the ear	3.2	2.1	4.2
Diseases of circulatory system (87–96)	18.3	14.1	22.3
Diseases of the heart (87–90)	10.1	6.4	13.5
Arteriosclerosis (part of 91)	1.2	1.4	1.1
Hemorrhoids (part of 93)	1.1	1.1	1.1
Adenitis (part of 94)	2.7	2.6	2.7
High blood pressure (part of 96)	1.2	.5	1.8
Other diseases of the circulatory system (92, 95, part of 91, 93, 94, and 96)	2.2	2.1	2.2

[1] Includes simple goiter only when it caused some illness in the period.

TABLE 2.—*Morbidity from groups of causes and from certain specified diseases in canvassed population group of white persons of Hagerstown, Md., December 1, 1921–March 31, 1924*—Continued

Diseases and conditions causing illness (numbers in parentheses refer to those given in the International List of Causes of Death, 1920)	Annual rate per 1,000 persons observed		
	Both sexes	Male	Female
Diseases and disorders of the digestive system (110–127, part of 108 and 205)	96.5	80.6	111.4
Ulcers of stomach and duodenum (111)	.7	1.2	.1
Indigestion and upset stomach (part of 112)	43.3	39.1	47.3
Biliousness (part of 205)	9.4	6.7	12.0
Stomach trouble, unqualified (part of 112)	7.6	7.0	8.1
Diarrhea −2 years (113)	4.5	4.5	4.6
Diarrhea +2 years (114)	8.2	7.2	9.2
Appendicitis (117)	5.1	3.2	6.9
Hernia (118a)	1.6	2.2	1.1
Intestinal disorders, including constipation (118b, 119)	2.2	1.6	2.8
Biliary calculi (123)	4.2	1.4	6.8
Cholecystitis (part of 124)	1.8	.4	3.2
Jaundice (part of 124)	2.7	2.2	3.2
Other and unqualified diseases of liver (part of 124)	1.7	.9	2.5
Other diseases of digestive system (110, 116, 126, 108 excluding teeth and gums)	3.3	2.7	3.8
Diseases of teeth and gums (part of 108)	7.5	5.9	9.0
Diseases of kidney and annexa (128–134)	11.0	7.1	14.7
Acute nephritis (128)	.5	.4	.7
Chronic nephritis (129)	2.6	2.0	3.2
Other and unqualified diseases of the kidney (131)	4.4	2.1	6.6
Cystitis and bladder trouble, unqualified (133)	2.5	1.7	3.2
Other diseases in this group (132, 134)	1.0	.9	1.1
Nonvenereal genito-urinary system (135–142)	11.1	1.1	20.4
Diseases of male organs (135–136)	.5	1.1	----------
Diseases of female genital organs (137–142)	6.0	----------	11.6
Menstruation (part of 141)	2.9	----------	5.6
Menopause (part of 141)	1.6	----------	3.2
Puerperal state (143–150)	23.9	----------	46.4
Abortion and stillbirth (part of 143)	2.0	----------	3.9
Confinements	19.6	----------	38.0
Other puerperal conditions (148–150)	2.3	----------	4.5
Diseases of skin and cellular tissue (part of 205,[1] 151–154)	17.6	20.6	14.8
Furuncle (152)	4.3	6.7	2.0
Abscess (153)	1.6	1.4	1.6
Impetigo contagiosa (part of 154)	1.5	1.5	1.4
Scabies and itch (part of 154)	1.4	1.9	.9
Other and unqualified skin conditions (part of 154 and 205)[1]	8.8	9.1	8.6
Diseases of bones and organs of locomotion (155–158, part of 205)	6.7	5.5	7.9
Lumbago, myalgia, myositis (part of 158)	3.0	3.2	2.7
Backache (part of 205)	2.2	.9	3.5
Other diseases of bones or locomotion (155, 156, part of 158)	1.5	1.4	1.6
Congenital malformations and infancy (159–163)	1.2	.6	1.6
Senility (164)	.8	.7	.9
External causes (165–203)	39.5	49.6	30.1
All poisonings (175, 176, 177)	2.8	3.5	2.1
Burns (178–179)	2.1	2.4	1.9
Fractures, wounds, injuries (ind.) (183–188, 201, 202)	7.0	14.1	.4
Fractures, wounds, injuries (nonind.) (183–188, 201, 202)	22.6	22.1	23.0
Fractures, wounds, injuries (not stated) (183–188, 201, 202)	3.1	5.4	.9
Other external causes (165–174, 181–182, 189, 190–196)	1.9	2.1	1.8
Ill-defined and unknown	10.2	9.2	11.0
Years of life exposed	16,517	8,001	8,516

[1] Includes rash, hives, and sores on body.

An illness rate of slightly more than one illness per person per year is indicated. This rate was somewhat higher than it would have been for two "normal" calendar years, for the reasons that the period of observation included nearly three winter seasons and only two summers and that in 1923 an outbreak of influenza occurred. At the same time it is far below what a record of *all* respiratory attacks

alone would show,[7] and very properly so, because the Hagerstown study was, as has been stated, a record of illnesses rather than of attacks that did not result in illness. The Hagerstown rate is about ten times the rate for illnesses causing absences from work among industrial workers (chiefly adult males) [8] for eight days or longer. The Hagerstown rate for males of all ages is more than twice the 1924 rate for illnesses causing absences of *two* days or longer among adult males employed in a group of establishments, while the Hagerstown rate for females of all ages is about 20 per cent higher than that for adult females employed in these establishments [9] When the higher illness rate among children, old persons as well as other persons not employed, who are included in the Hagerstown study, are taken into account, it would appear that the Hagerstown rate compares very favorably from the point of view of completeness with the records of illness incapacitating for two days or longer A more exact comparison, however, will be made in a later report when the records for persons of different ages are presented and discussed.[10]

The general picture of illness afforded by Table 2 is shown in graphic form in Figure 1. The relative importance from the point of *incidence*—not severity as measured by duration, incapacitation, fatality, or by other means—of the principal diseases and groups of diseases is indicated in such a way as to need no detailed comment, but a few general observations may be offered.

Doubtless it will be somewhat surprising that such diseases as tuberculosis, cancer, diseases of the heart, kidneys, etc., upon which so much emphasis is placed in public-health work, occupy such a low position in the list of diseases which cause illness. Upon this indication two comments suggest themselves: (1) That as *causes of illness* in a *general* population group, a group that has not been considered heretofore to the same extent as special groups of persons, these diseases are actually far less frequent than the ailments which most of us, who are not suffering from serious ill health, experience; (2) that the measure of the frequency of these diseases was, in this study, the extent to which they *manifested* themselves in illness; that is, our study was not an intensive physical examination nor an exhaustive survey of ill health. This observation is further supported

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[7] Unpublished records of respiratory attacks among members of families of medical officers of the Army, Navy, and Public Health Service showed a rate of about 2,000 attacks per 1,000 persons. The rate among college students as reported by themselves for a six months' period was even higher, but it included many cases which ordinarily would not be noticed

[8] Frequency of Disabling Illnesses Among Industrial Employees Pub Health Rep., Jan 22, 1926, 41, 113-121. (Reprint No. 1060)

[9] From unpublished data in the Offices of Statistical Investigations and Industrial Hygiene, United States Public Health Service, upon which a report will be presented shortly.

[10] In Tables 1 and 2, under the heading of illnesses due to respiratory attacks, a large number (6,914 cases) are grouped under the subtitle "other diseases of respiratory system (including head colds, chest, and bronchial conditions)" During the second half of the period an effort was made to obtain more definite statements as to the nature of these attacks, the results of which will be presented in a later publication dealing with morbidity from respiratory diseases

by the evidence, which will be elaborated in a later paper, afforded by records of medical attendance which showed, for example, that all or practically all cases of tuberculosis, high-blood pressure, nephritis, cancer, etc , recorded were those which were attended by physicians during the period of observation.

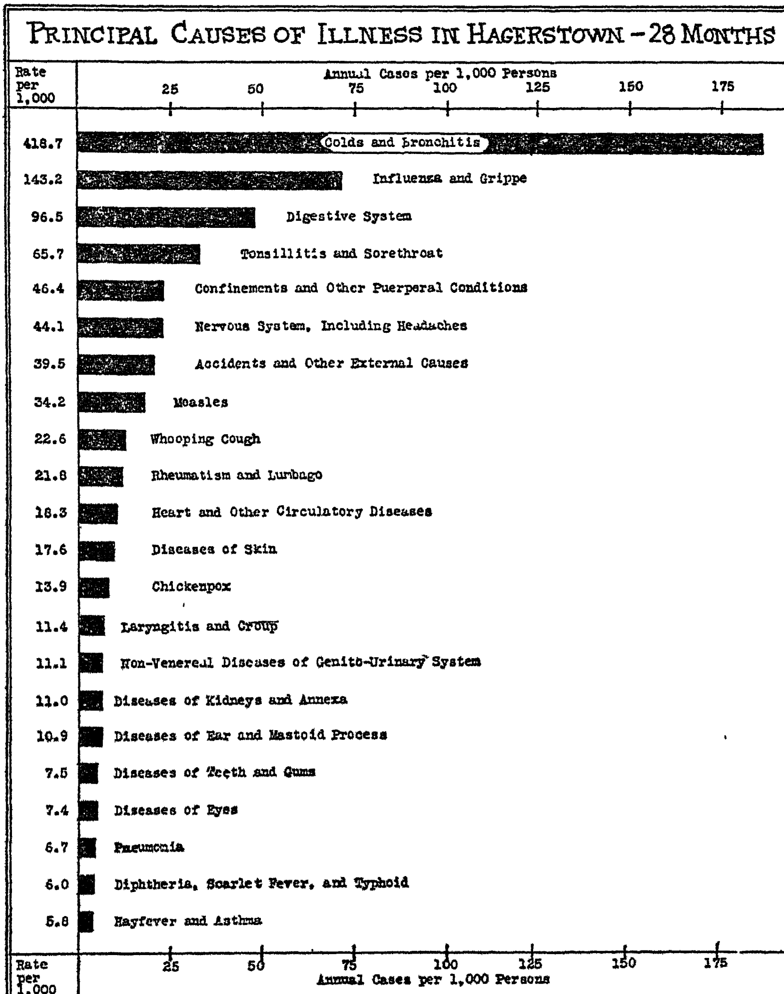

FIG 1

On the other hand, the general outline of the causes of illness in a fairly representative population afforded by Tables 1 and 2 seems to us to be extremely illuminating. It is shown that the causes of illness present an aspect quite different from that presented by the causes of mortality as we now record and classify mortality. Of

the total illnesses observed, we find the proportionate distribution according to broad groups of causes as follows:

Percentage distribution of illnesses in each broad disease group

General disease groups	Per cent of total illnesses
Respiratory	61.4
Epidemic, endemic, and infectious	8.1
General	2.0
Nervous system	4.1
Eye and annexa	.7
Ear and mastoid process	1.0
Heart and circulatory system	1.8
Digestive	8.9
Teeth and gums	.7
Kidneys and annexa	1.0
Genito-urinary (nonvenereal)	1.0
Puerperal	2.2
Skin	1.6
Bones and organs of locomotion	.6
External causes	3.7
Other	1.1

The fact that 61 per cent of the illnesses were due to respiratory diseases as against only 20 per cent of mortality in Hagerstown during the same period [11] is significant of the unsuitability of mortality statistics as any indication of the causes of morbidity. On the other hand, the fact that 35 per cent of the deaths as against 2.8 per cent of the illnesses were due to diseases of the circulatory system and kidneys and annexa is equally significant of the unsuitability of illness statistics (when cases of relatively short duration and slight severity are included) as indices of the causes of contemporaneous mortality. A relationship between morbidity and mortality exists, of course, but it is intricate and variable; the experience here presented confirms a wise dictum that no ratio between morbidity and mortality may be assumed for the great majority of diseases without a knowledge of their fatality.

INCIDENCE OF CERTAIN DISEASES AS REVEALED BY ILLNESS

Having clearly in mind the fact that the "statistical unit" in our study is an illness lasting approximately three days or longer, and having ascertained as best we could the causes of these illnesses and classified them accordingly, we may next consider the data as records of the incidence and prevalence of specific diseases.

It is obvious that the value of the observations in affording evidence on these important points must vary according to diseases in

[11] Incidence of illness in a General Population Group Pub. Health Rep., Feb. 13, 1926, 40, 279-291. (Reprint No 989.)

proportion to the extent to which an attack of a disease results in illness of that degree of severity which was recorded. Thus, many attacks of "colds" certainly were not recorded because only those resulting in "illnesses," according to the definition of the term, were observed. On the contrary, it is quite certain that a very much larger proportion of the cases of whooping cough were noticed. This suggests a point of refinement, however, that morbidity statistics are far from having attained, but which is well to keep in mind if one wishes to put data of the sort we are dealing with to uses involving rather fine shades of interpretation. It is reasonable to say, we believe, that the Hagerstown study affords a fairly complete indication of the incidence of most diseases occurring among a general population group the attacks or effects of which were severe enough to produce the condition of sickness.

With these limitations before us, two tables are presented for consideration

One (Table 3) shows the *annual* incidence rates for a number of acute diseases and diseases which manifested themselves in a more or less acute form, either as primary or as contributory causes of illness. It will be observed at once that some of the diseases are rather poorly defined, since they are grouped under general titles. This means that, while the information secured was sufficiently accurate to permit of a general classification as to their nature, it was not specific enough to warrant a very definite designation as to the exact disease or condition involved. For the great majority of diseases included in Table 3, however, we feel that the specific classifications employed are justified by the information secured.

The rates in Table 3 require no particular comment. They are of unusual interest, it is believed, because they represent a rather extended and intensive series of observations upon a fairly typical population. For some diseases the rates will possess somewhat permanent value as a basis for comparison with other morbidity studies of a similar kind; for others, such as measles or whooping cough, the rates are characteristic only of the particular period in which they occurred.

TABLE 3.—*Incidence of acute attacks of certain diseases resulting in illness during a 28 months' period in a general population group in Hagerstown, Md.*

Diseases and conditions causing illness (numbers in parentheses refer to those given in the International List of Causes of Death, 1920)	Number of cases			Rate per 1,000 years of exposure		
	Both sexes	Males	Females	Both sexes	Males	Females
Acute respiratory:						
Influenza and grippe (11)	2,382	1,014	1,368	144 21	126 73	160 64
Pneumonia, all forms (100-101)	144	75	69	8 72	9 37	8 10
Pleurisy (102)	38	16	22	2 30	2 00	2 58
Diseases of pharynx (109)	1,089	466	623	65 93	58 24	73 16
Tonsillitis	476	194	282	28 82	24 25	33 11
Sore throat	514	223	291	31 12	27 87	34 17
Quinsy	55	29	26	3 33	3 62	3 05
Other diseases of pharynx	44	20	24	2 66	2 50	2 82
Diseases of larynx (98)	187	80	107	11 32	10 00	12 56
Laryngitis	94	25	69	5 69	3 12	8 10
Croup	88	54	34	5 33	6 75	3 99
Other diseases of larynx	5	1	4	30	12	47
Colds and other respiratory diseases (including chest and bronchial conditions)	6,933	3,087	3,846	419 74	385 82	451 62
Epidemic, endemic, and infectious diseases						
Typhoid fever (1)	19	6	13	1 15	75	1 53
Measles (7)	568	279	289	34 39	34 87	33 94
Scarlet fever (8)	34	18	16	2. 06	2 25	1 88
Whooping cough (9)	374	204	170	22 64	25 50	19 96
Diphtheria (10)	45	21	24	2 72	2 62	2 82
Mumps (13)	9	3	6	54	37	70
Chicken pox (25a)	232	139	93	14 05	17 37	10 92
German measles (25b)	18	7	11	1 09	87	1 29
Cholera nostras (15)	36	9	27	2 18	1 12	3.17
Dysentery (16)	10	4	6	61	50	.70
Diseases of nervous system (acute)						
Cerebral hemorrhage and apoplexy (74)	15	5	10	.91	62	1 17
Convulsions and cramps (79, 80)	13	11	2	.79	1 37	23
Hysteria (part of 82)	7	1	6	.42	.12	.70
Diseases of the digestive system						
Stomach trouble, indigestion, "biliousness," etc. (112)	955	398	557	57 82	49 74	65 41
Diarrhea −2 years (113)	79	38	41	4 78	4 75	4.81
Diarrhea +2 years (114)	123	50	73	7 45	6.25	8 57
Acute intestinal conditions (119)	25	12	13	1.51	1 50	1 53
Jaundice (part of 124)	45	18	27	2 72	2 25	3 17
Diseases of teeth and gums (part of 108)	136	50	86	8 23	6 25	10 10
Eye conditions						
Conjunctivitis and other acute eye trouble (85)	125	67	58	7 58	8 37	6 81
Ear conditions						
Otitis media (part of 86)	166	76	90	10 05	9 50	10 57
Earache and other unqualified ear trouble (part of 86)	71	23	48	4.30	2 88	5 64
Adenitis (part of 94)	57	28	29	3 45	3 50	3.41
Diseases of skin and cellular tissue.						
Furuncle (152)	77	56	21	4 66	7 00	2 47
Abscess (153)	31	12	19	1 88	1 50	2 23
Impetigo contagiosa (part of 154)	25	13	12	1 51	1 62	1 41
Scabies and itch (part of 154)	24	16	8	1 45	2 00	.94
Sores (part of 205)	67	36	31	4 06	4 50	3 64
Hives and rash (part of 205)	48	21	27	2 91	2.62	3 17
Other and unqualified skin conditions (part of 154)	49	25	24	2 97	3 12	2 82

In Table 4 an entirely different phase of morbidity is presented. This table represents an attempt to answer the question, How many *persons* were affected by certain diseases and conditions of a more or less continuing or chronic nature? Here, again it must be kept in mind that only those chronic conditions were revealed which manifested themselves in illness or definitely morbid effects as a result of the disease or condition during the period of observation. It is evident, of course, that observations such as these can not yield the same kind of results as a physical examination of each individual. Latent or incipient diseases and conditions that did *not* manifest themselves in morbid effects obviously do not appear in the rates

shown in Table 4 It is believed, however, that nearly all of the more serious of these diseases and conditions are portrayed While the cases recorded of venereal diseases, for example, are probably too low—although we have no comparable data to judge by—the rate for active cases of tuberculosis, to cite another instance, is just about what we would expect in a population and under conditions of the kind observed The facts that two-thirds of the persons were under observation for at least two years and that nine-tenths of them were observed for at least one year by a competent field assistant who took advantage of the opportunity to become fairly well acquainted with every family, should also be considered in appraising the completeness of the information collected and the accuracy of the rates in this table In fact, we are inclined to place slightly more dependence upon the data shown in Table 4 than upon the records of not serious attacks of some of the more acute diseases shown in Table 3.

TABLE 4 —*Prevalence of certain chronic conditions resulting in illnesses during a 28 month's period in a general population group in Hagerstown, Md*

Diseases or conditions (numbers in parentheses refer to those given in the International List of Causes of Death, 1920)	Number of persons reporting specified conditions			Rate per 1,000 individuals observed		
	Both sexes	Males	Females	Both sexes	Males	Females
Tuberculosis, pulmonary (31)	49	15	34	5.71	3.60	7.69
Tuberculosis, nonpulmonary (33-36)	11	4	7	1.28	96	1.58
Venereal diseases (38-40)	31	6	25	3.61	1.44	5.65
Cancer (43-49)	20	3	17	2.33	72	3.85
Tumors, benign (50)	7	2	5	82	48	1.13
Rheumatism (51-52)	246	84	162	28.65	20.16	36.64
Lumbago, myalgia, myositis (part of 158)	46	23	23	5.36	5.52	5.20
Rickets (56)	4	3	1	47	72	23
Diabetes (57)	12	2	10	1.40	48	2.26
Anemia (58)	13	1	12	1.51	24	2.71
Goitre, exophthalmic (60a)	9	1	8	1.05	24	1.81
Paralysis (75)	27	9	18	3.14	2.16	4.07
Epilepsy (78)	8	6	2	.93	1.44	45
Chorea (81)	16	4	12	1.86	96	2.71
Neuralgia (part of 82)	113	25	88	13.16	6.00	19.91
Neuritis and sciatica (part of 82)	74	16	58	8.62	3.84	13.12
Neurasthenia and nervous exhaustion (part of 84)	192	28	164	22.36	6.72	37.10
Diseases of eye (chronic) (85)	14	6	8	1.63	1.44	1.81
Diseases of the heart (87-90)	182	57	125	21.19	13.68	28.27
Arteriosclerosis (part of 91)	29	16	13	3.38	3.84	2.94
Hemorrhoids (part of 93)	18	9	9	2.10	2.16	2.04
Varicose veins and phlebitis (part of 93)	9	3	6	1.05	.72	1.36
High blood pressure (part of 96)	22	7	15	2.56	1.68	3.39
Asthma and hay fever (105, part of 107)	61	27	34	7.10	6.48	7.69
Ulcers of stomach and duodenum (111)	8	6	2	.93	1.44	45
Chronic indigestion, constipation, and other stomach or intestinal conditions (112, 114, 119)	85	29	56	9.90	6.96	12.67
Intestinal parasites (116)	23	14	9	2.68	3.36	2.04
Appendicitis (117)	85	25	60	9.90	6.00	13.57
Hernia (118)	21	14	7	2.45	3.36	1.58
Biliary calculi and calculi of the urinary passages (123, 132)	57	14	43	6.64	3.36	9.73
Cholecystitis (part of 124)	24	3	21	2.79	72	4.75
Unqualified and other liver conditions (part of 124)	28	9	19	3.26	2.16	4.30
Nephritis (acute and chronic) (128, 129)	60	25	35	6.99	6.00	7.92
Unqualified and other kidney conditions (131)	84	23	61	9.78	5.52	13.80
Diseases of bladder (133)	41	14	27	4.77	3.36	6.11
Diseases of male organs (135, 136)	12	12	--------	1.40	2.88	--------
Chronic diseases of femal genital organs (137-142)	70	--------	70	8.15	--------	15.83
Menopause (part of 141)	37	--------	37	4.31	--------	8.37
Congenital malformation (159-161)	15	5	10	1.78	1.20	2.27
Number of persons	8,587	4,166	4,421	--------	--------	--------

ACKNOWLEDGMENTS

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In the analysis of the data I am especially indebted to Associate Statistician S. D. Collins and Assistant Statistician Dorothy G Wiehl, and other members of the statistical staff, as well as to several officers of the Public Health Service for constant advice on medical points.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Compact Rapid Sand Filters of Washington. Philip O. MacQueen, United States assistant engineer, Washington, D. C., district *Water Works Engineering*, vol. 79, No. 12, June 15, 1926, pp. 777–778 and 797–802. (Abstract by C. C. Ruchhoft.)

The rapid sand filtration plant of Washington, D C , which will be completed in 1927, is described The plant, with a capacity of 80,000,000 gallons per day, is located near the Dalecarlia 100,000,000 gallon raw-water reservoir. A 2,400 k hydroelectric plant, using surplus water from the raw-water conduits, will furnish power for pumping the filtered water. A control chamber near the reservoir has channels for the raw, treated, settled, and filtered water and is arranged to permit very flexible operation. The chemicals are applied in the control chambers. Two mixing basins, 80 feet square and 18 feet deep and fitted with baffles of the around-the-end type, providing a total travel of 1,600 feet per basin, are arranged to be operated in series or parallel. There are two settling basins, each 333 feet long by 150 feet wide and from 12 to 17 feet deep. Each basin is provided with a light concrete baffle wall, which causes the water to flow the length of the basin and return to a point opposite the influent. With the basins in parallel at the rated capacity of the plant, the settling period will be three hours and the velocity 3 feet per minute. The filter building has 20 filters 54 by 31 feet and 15 feet deep, with 18 inches and 30 inches of gravel and sand, respectively. The strainer system will be the new open wooden slat type. The filtered water flows to a 15,000,000-gallon covered concrete reservoir, from where it is pumped to the high service reservoirs in the city. The plant is arranged so that the depth of water in the filtered-water reservoir regulates the rate of the filters. The

pumping station contains nine pumps of the horizontal volute type driven by synchronous-type motors

Sterilization of Water. Ryukichi Joh *Journal of the Public Health Association of Japan*, vol. 2, No 4, April, 1926, pp. 4–6. (Abstract by E. C Sullivan.)

The use of bleaching powder was first introduced in Kagawa Prefecture in 1912 as an experiment, and subsequently it was used extensively in 1919 throughout dysentery-stricken areas in the prefecture Of the various methods for the chemical sterilization of drinking water practiced at present, chlorination is the best in every respect

The complaints of people against the use of chlorine when bleaching powder has been thrown into wells, due to odors and turbidity caused by the production of carbonate of lime, can be avoided by the use of chlorine in the form of hypochlorous acid An additional advantage is that hypochlorous acid is stronger than the same quantity of bleaching powder. It can be prepared any time, at any place, and in an easier way than bleaching powder

Hypochlorous acid can be prepared by placing bleaching powder and washing soda in a jar in the proportion of 20 parts of water, 1 of bleaching powder, and 2 of sodium carbonate, and stirring well until the soda is dissolved and floating substances are deposited.

If the solution formed is left standing for some time, the carbonate of lime will be deposited. The cleared liquid is then decanted, which is an easier and simpler method than making bleaching powder into a milky liquid. While its use brings no apparent change to the well water, its germicidal power is much stronger than that of bleaching powder.

Sand Flies and Sand-Fly Fever in the Peshawar District. Lieut. Col. T. C. McCombie Young, Capt. A. E. Richmond, and Assistant Surgeon G. R. Brendish. *Indian Journal of Medical Research*, vol 13, No. 4, April, 1926, pp. 961–1021. (Abstract by A. W. Fuchs.)

The investigations of the commission on sand-fly fever in the Peshawar District were largely concentrated on an endeavor to ascertain the breeding grounds of *P. papatasii.* Figures on hospital admissions indicated that immunity to sand-fly fever increases with length of residence. A dry season hastens the appearance of the sand fly as well as the seasonal peak of incidence of the disease. In 1923 and 1924 the number of British troops hospitalized on account of sand-fly fever rose to 11 per cent of the total monthly strength in June and continued at a high level through the two months of prevalance.

Some of the conclusions reached were the following: (1) Topography, sanitation in the vicinity of barracks, proximity of irrigation water and of bazaars appear to have little influence on sand-fly infestation of barracks, (2) on emerging from the pupa case in the earth cracks of the breeding grounds the female sand fly waits some hours till the chitin of the body hardens, takes shelter in a shaded earth crevice during daylight, feeds and is fertilized within 36 hours, remains in houses for 60 to 84 hours, and returns to the breeding grounds where eggs are laid within 108 hours, eggs hatch after a month or more, (3) *P papatasii* breed close to habitations in slightly moist organic matter lying in hollows in broken ground and nullahs, near a crack or crevice; for experimental breeding an earthenware pot filled with such materials is suitable, (4) no confirmation could be obtained of Whittingham's observation as to *Leptospira* as the possible causative agent of sand-fly fever; (5) sand-fly fever is a distinct disease entity, not a modified form of dengue, although the manifestations vary to a very large extent; (6) for personal prophylaxis a citronella-camphor mixture applied to a net has a protective influence as a repellant. On account of the cost and the practical difficulties, fumigation of barracks rooms is not practicable.

DEATHS DURING WEEK ENDED SEPTEMBER 11, 1926

Summary of information received by telegraph from industrial insurance companies for week ended September 11, 1926, and corresponding week of 1925 (From the Weekly Health Index, September 15, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Sept 11, 1926	Corresponding week, 1925
Policies in force	63, 960, 000	60, 986, 892
Number of death claims	9, 963	8, 782
Death claims per 1,000 policies in force, annual rate	8. 1	7. 5

Deaths from all causes in certain large cities of the United States during the week ended September 11, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, September 15, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Sept. 11, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Sept 11, 1926 [2]
	Total deaths	Death rate [1]		Week ended Sept 11, 1926	Corresponding week, 1925	
Total (66 cities)	5,700	10.3	11.1	765	924	[3] 62
Akron	43			11	7	117
Albany [4]	35	15.3	13.7	2	3	42
Atlanta	74			13	10	
White	36			8		
Colored	38	(5)		5		
Baltimore [4]	189	12.2	11.3	24	36	70
White	143			17		61
Colored	46	(5)		7		114
Birmingham	59	14.6	13.9	4	9	
White	28			3		
Colored	31	(5)		1		
Boston	163	10.8	11.3	30	36	85
Bridgeport	27			2	3	34
Buffalo	124	11.9	11.8	24	18	100
Cambridge	13	5.6	7.0	1	1	17
Camden	30	11.9	11.8	7	3	118
Canton	16	7.6	10.3	6	4	133
Chicago [4]	508	8.7	9.5	85	84	75
Cincinnati	117	14.8	18.1	29	22	181
Cleveland	144	7.8	10.3	23	39	60
Columbus	63	11.5	14.7	9	10	83
Dallas	43	11.2	14.3	7	3	
White	31			4		
Colored	12	(5)		3		
Dayton	46	13.6	10.6	6	1	94
Denver	70	12.8	13.4	6	12	
Des Moines	22	7.9	12.5	4	1	67
Detroit	263	10.6	10.4	43	71	69
Duluth	13	6.0	7.1	3	1	78
El Paso	27	12.9	14.9	5	7	
Erie	15			2	1	38
Fall River [4]	35	13.9	8.1	2	3	29
Flint	18	6.9	6.8	5	6	83
Fort Worth	32	10.5	12.0	5	4	
White	24			3		
Colored	8	(5)		2		
Grand Rapids	26	8.7	7.5	4	2	58
Houston	60			7	4	
White	40			6		
Colored	20	(5)		1		
Indianapolis	56	8.0	13.8	6	12	44
White	45			4		34
Colored	11	(5)		2		110
Jersey City	45	7.4	8.6	9	9	64
Kansas City, Kans	23	10.3	12.1	2	4	35
White	12			2		42
Colored	11	(5)		0		0
Kansas City, Mo	65	9.0	12.3	8	13	
Los Angeles	186			11	19	31
Louisville	76	12.7	13.5	6	14	52
White	53			4		40
Colored	23	(5)		2		125
Lowell	21			5	2	93
Lynn	19	9.5	9.6	1	2	25
Memphis	62	18.3	20.9	6	12	
White	32			3		
Colored	30	(5)		3		
Milwaukee	103	10.4	8.8	15	19	69
Minneapolis	59	7.1	8.8	3	9	17
Nashville [4]	46	17.5	13.4	9	8	
White	34			9		
Colored	12	(5)		0		
New Bedford	22			2	5	35
New Haven	25	7.2	8.7	1	3	14

(See footnotes at end of table).

Deaths from all causes in certain large cities of the United States during the week ended September 11, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Sept 11, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Sept 11, 1926[2]
	Total deaths	Death rate[1]		Week ended Sept 11, 1926	Corresponding week, 1925	
New Orleans	128	15.9	18.5	15	27	
White	71			7		
Colored	57	(5)		8		
New York	1,143	10.1	9.7	146	136	59
Bronx Borough	147	8.5	8.1	11	10	36
Brooklyn Borough	392	9.1	8.5	71	52	72
Manhattan Borough	481	13.4	12.5	56	54	62
Queens Borough	80	5.5	6.6	7	19	32
Richmond Borough	43	5.7	13.2	1	1	18
Newark, N J	68	7.7	11.2	7	20	33
Norfolk	31	9.3	8.9	2	4	37
White	17			2		59
Colored	14	(5)		0		0
Oakland	41	8.2	8.6	5	3	58
Oklahoma City	27			6	1	
Omaha	46	11.1	9.4	3	6	31
Paterson	25	9.1	8.8	1	0	17
Philadelphia	395	10.3	11.3	48	57	64
Pittsburgh	116	9.5	12.0	20	24	66
Portland, Oreg	53			5	0	51
Providence	46	8.7	9.9	5	5	41
Richmond	45	12.4	14.8	8	4	101
White	24			2		39
Colored	21	(5)		6		210
Rochester	58	9.4	9.9	8	11	64
St Louis	166	10.4	18.1	16	33	
St Paul	47	9.9	8.7	3	5	27
Salt Lake City[4]	33	12.9	9.2	6	5	83
San Antonio	56	14.2	11.8	11	9	
San Diego	28	13.3	12.8	0	0	0
San Francisco	123	11.3	12.0	5	13	30
Schenectady	15	8.4	10.7	3	3	87
Seattle	72			5	1	46
Somerville	12	6.3	8.4	2	4	52
Spokane	28	13.4	11.0	2	2	47
Springfield, Mass	27	9.7	9.5	4	3	58
Syracuse	31	8.8	10.9	6	5	76
Tacoma	27	13.3	10.5	1	2	23
Toledo	72	12.8	13.1	8	12	78
Trenton	26	10.1	11.8	2	5	33
Utica	25	12.7	12.8	5	1	110
Washington, D C	98	9.7	12.1	12	22	68
White	64			7		58
Colored	34	(5)		5		91
Waterbury	14			1	1	21
Wilmington, Del	19	8.0	12.0	2	4	47
Worcester	42	11.3	11.8	4	9	46
Yonkers	18	8.1	5.5	1	0	22
Youngstown	30	9.5	13.4	4	9	51

[1] Annual rate per 1,000 population
[2] Deaths under 1 year per 1,000 births Cities left blank are not in the registration area for births.
[3] Data for 64 cities
[4] Deaths for week ended Friday, September 10, 1926
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Kansas City, Kans , 14, Louisville, 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D C , 25

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended September 18, 1926

ALABAMA

	Cases
Chicken pox	16
Dengue	1
Diphtheria	38
Influenza	11
Malaria	139
Measles	15
Mumps	1
Pellagra	10
Pneumonia	24
Poliomyelitis	2
Scarlet fever	19
Tetanus	1
Tuberculosis	110
Typhoid fever	83
Whooping cough	24

ARIZONA

	Cases
Diphtheria	2
Measles	2
Scarlet fever	2
Trachoma	2

ARKANSAS

	Cases
Chicken pox	23
Diphtheria	4
Hookworm disease	2
Influenza	26
Malaria	194
Measles	2
Mumps	11
Ophthalmia neonatorum	3
Paratyphoid fever	7
Pellagra	12
Scarlet fever	7
Smallpox	2
Trachoma	1
Tuberculosis	14
Typhoid fever	56
Whooping cough	34

CALIFORNIA

	Cases
Cerebrospinal meningitis—Los Angeles	1
Chicken pox	56
Diphtheria	74
Influenza	6
Lethargic encephalitis—San Francisco	1
Measles	248
Mumps	99
Poliomyelitis	
Los Angeles	2
Los Angeles County	1
Riverside County	1
San Francisco	1
San Jose	1
San Luis Obispo County	1
Santa Barbara County	1
Scarlet fever	74
Smallpox	1
Tuberculosis	128
Typhoid fever	23
Whooping cough	62

COLORADO

	Cases
Chicken pox	2
Diphtheria	29
Measles	5
Pneumonia	1
Poliomyelitis	1
Scarlet fever	12
Tuberculosis	31
Typhoid fever	14
Whooping cough	1

CONNECTICUT

	Cases
Cerebrospinal meningitis	1
Chicken pox	3
Diphtheria	8
German measles	1
Influenza	2

CONNECTICUT—continued

	Cases
Malaria	1
Measles	2
Mumps	3
Pneumonia (broncho)	11
Pneumonia (lobar)	15
Poliomyelitis	2
Scarlet fever	17
Septic sore throat	1
Tuberculosis (all forms)	30
Typhoid fever	8
Whooping cough	17

DELAWARE

Diphtheria	4
Poliomyelitis	3
Scarlet fever	5
Tuberculosis	5
Typhoid fever	5
Whooping cough	2

FLORIDA

Chicken pox	2
Diphtheria	18
Influenza	2
Malaria	5
Measles	1
Mumps	10
Pneumonia	2
Scarlet fever	3
Smallpox	14
Tuberculosis	5
Typhoid fever	6
Typhus fever	1
Whooping cough	9

GEORGIA

Chicken pox	22
Dengue	1
Diphtheria	60
Dysentery	3
Hookworm disease	5
Influenza	20
Malaria	93
Measles	2
Mumps	3
Paratyphoid fever	2
Pellagra	5
Pneumonia	11
Scarlet fever	11
Septic sore throat	8
Smallpox	4
Tuberculosis	22
Typhoid fever	104
Whooping cough	7

IDAHO

Chicken pox	1
Diphtheria	10
Influenza	1
Measles	2
Mumps	1
Pneumonia	1
Poliomyelitis:	
Eden	1
Twin Falls	1
Scarlet fever	4
Trachoma	3
Typhoid fever	3
Whooping cough	4

ILLINOIS

	Cases
Cerebrospinal meningitis:	
Cook County	1
Livingston County	1
Morgan County	1
Chicken pox	20
Diphtheria	52
Influenza	21
Lethargic encephalitis—Cook County	1
Measles	51
Mumps	18
Pneumonia	81
Poliomyelitis:	
Cook County	2
Tazewell County	1
Scarlet fever	90
Smallpox	4
Tuberculosis	282
Typhoid fever	72
Whooping cough	171

INDIANA

Chicken pox	4
Diphtheria	44
Influenza	30
Measles	13
Poliomyelitis	1
Scarlet fever	59
Smallpox	5
Tuberculosis	38
Typhoid fever	69
Whooping cough	58

IOWA

Cerebrospinal meningitis	1
Chicken pox	3
Diphtheria	5
German measles	1
Measles	1
Poliomyelitis	2
Scarlet fever	18
Smallpox	1
Tuberculosis	11
Typhoid fever	1
Whooping cough	9

KANSAS

Cerebrospinal meningitis:	
Cimarron	2
Geneseo	1
Chicken pox	7
Diphtheria	9
German measles	5
Influenza	5
Measles	11
Pneumonia	9
Poliomyelitis:	
Hutchinson	2
Larned	1
Norcatur	1
Penalosa	1
Rabies	1
Scarlet fever	31
Smallpox	4
Tuberculosis	39
Typhoid fever	39
Whooping cough	68

LOUISIANA

	Cases
Cerebrospinal meningitis	1
Diphtheria	16
Influenza	7
Lethargic encephalitis	2
Malaria	28
Pneumonia	18
Poliomyelitis	3
Scarlet fever	7
Tuberculosis	39
Typhoid fever	48

MAINE

	Cases
Chicken pox	7
Conjunctivitis	1
Diphtheria	8
German measles	3
Measles	37
Mumps	4
Pneumonia	5
Scarlet fever	46
Septic sore throat	3
Tuberculosis	10
Typhoid fever	7
Vincent's angina	1
Whooping cough	37

MARYLAND [1]

	Cases
Cerebrospinal meningitis	3
Chicken pox	4
Diphtheria	22
Dysentery	7
Impetigo contagiosa	4
Influenza	4
Malaria	6
Measles	5
Mumps	3
Paratyphoid fever	5
Pellagra	1
Pneumonia (broncho)	10
Pneumonia (lobar)	8
Poliomyelitis	2
Scarlet fever	12
Smallpox	1
Tuberculosis	66
Typhoid fever	70
Whooping cough	70

MASSACHUSETTS

	Cases
Cerebrospinal meningitis	1
Chicken pox	19
Conjunctivitis (suppurative)	8
Diphtheria	48
German measles	5
Influenza	6
Lethargic encephalitis	2
Malaria	1
Measles	15
Mumps	28
Ophthalmia neonatorum	15
Pneumonia (lobar)	32
Poliomyelitis	13
Scarlet fever	78
Tetanus	1
Trachoma	1
Trichinosis	1

[1] Week ended Friday.

MASSACHUSETTS—continued

	Cases
Tuberculosis (pulmonary)	87
Tuberculosis (other forms)	24
Typhoid fever	9
Whooping cough	88

MICHIGAN

	Cases
Diphtheria	80
Measles	17
Pneumonia	30
Scarlet fever	65
Smallpox	1
Tuberculosis	42
Typhoid fever	33
Whooping cough	133

MINNESOTA

	Cases
Chicken pox	3
Diphtheria	35
Measles	14
Poliomyelitis	1
Scarlet fever	83
Tuberculosis	56
Typhoid fever	2
Whooping cough	21

MISSISSIPPI

	Cases
Diphtheria	25
Scarlet fever	2
Typhoid fever	30

MISSOURI

(Exclusive of Kansas City and St Joseph)

	Cases
Diphtheria	40
Measles	8
Mumps	5
Pneumonia	1
Scarlet fever	32
Trachoma	3
Tuberculosis	33
Typhoid fever	21
Whooping cough	47

MONTANA

	Cases
Chicken pox	3
Diphtheria	6
Mumps	2
Scarlet fever	3
Smallpox	1
Tuberculosis	7
Tularaemia	1
Typhoid fever	3
Whooping cough	2

NEBRASKA

	Cases
Diphtheria	4
Poliomyelitis	5
Scarlet fever	20
Smallpox	3
Tuberculosis	7
Typhoid fever	1
Whooping cough	8

NEW JERSEY

	Cases
Chicken pox	12
Diphtheria	45
Dysentery	2

NEW JERSEY—continued

	Cases
Malaria	1
Measles	9
Pneumonia	30
Poliomyelitis	4
Scarlet fever	46
Trachoma	1
Typhoid fever	36
Whooping cough	129

NEW MEXICO

Malaria	8
Measles	1
Mumps	3
Pneumonia	2
Rabies (in animals)	1
Scarlet fever	1
Tuberculosis	11
Typhoid fever	13
Whooping cough	18

NEW YORK

(Exclusive of New York City)

Anthrax	1
Cerebrospinal meningitis	1
Chicken pox	58
Diphtheria	35
Dysentery	3
German measles	21
Influenza	2
Malaria	2
Measles	58
Mumps	29
Ophthalmia neonatorum	1
Paratyphoid fever	1
Pneumonia	74
Poliomyelitis	45
Scarlet fever	46
Tetanus	1
Typhoid fever	58
Vincent's angina	9
Whooping cough	260

NORTH CAROLINA

Chicken pox	2
Diphtheria	102
Dysentery (bacillary)	4
German measles	1
Malaria	23
Measles	13
Poliomyelitis	2
Scarlet fever	26
Septic sore throat	3
Smallpox	5
Typhoid fever	89
Whooping cough	191

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Diphtheria	19
Influenza	33
Malaria	130
Pneumonia	8
Poliomyelitis—Osage County	1
Scarlet fever	21
Smallpox	1
Typhoid fever	115
Whooping cough	4

[2]Deaths.

OREGON

	Cases
Chicken pox	1
Diphtheria	10
Dysentery	1
Influenza	8
Malaria	1
Measles	5
Mumps	10
Pneumonia [2]	2
Poliomyelitis	1
Scarlet fever	20
Smallpox	8
Tuberculosis [2]	2
Typhoid fever	13
Whooping cough	2

PENNSYLVANIA

Cerebrospinal meningitis:	
Altoona	1
Phoenixville	1
Wilkes-Barre	1
Chicken pox	33
Diphtheria	91
German measles	3
Impetigo contagiosa	12
Measles	93
Mumps	10
Ophthalmia neonatorum—Philadelphia	1
Pneumonia	25
Poliomyelitis:	
Altoona	1
Bradford	1
Johnstown	1
Mahoning Township [1]	1
Scabies	1
Scarlet fever	101
Tetanus—Lancaster	1
Tuberculosis	87
Typhoid fever	55
Whooping cough	362

RHODE ISLAND

Cerebrospinal meningitis—Tiverton	1
Chicken pox	1
Measles	1
Poliomyelitis—Providence	1
Scarlet fever	2
Tuberculosis	2
Typhoid fever	2
Whooping cough	2

SOUTH DAKOTA

Chicken pox	6
Diphtheria	1
Measles	16
Mumps	1
Pneumonia	1
Poliomyelitis	1
Scarlet fever	11
Tuberculosis	4
Typhoid fever	1
Whooping cough	12

TENNESSEE

Chicken pox	3
Diphtheria	23
Dysentery	3

[1] County not specified.

TENNESSEE—continued

	Cases
Influenza	13
Malaria	85
Measles	8
Mumps	4
Ophthalmia neonatorum	5
Pellagra	8
Pneumonia	8
Scarlet fever	38
Trachoma	2
Tuberculosis	25
Typhoid fever	193
Whooping cough	59

TEXAS

Chicken pox	2
Diphtheria	14
Influenza	6
Lethargic encephalitis	1
Mumps	5
Pellagra	2
Pneumonia	4
Scarlet fever	11
Tuberculosis	13
Typhoid fever	46
Whooping cough	37

UTAH

Chicken pox	1
Diphtheria	4
Influenza	1
Measles	9
Mumps	1
Pneumonia	2
Poliomyelitis—Salt Lake City	1
Scarlet fever	1
Typhoid fever	2
Whooping cough	11

VERMONT

Chicken pox	3
Measles	4
Mumps	10
Scarlet fever	6
Whooping cough	33

WASHINGTON

Cerebrospinal meningitis—Spokane	2
Chicken pox	9
Diphtheria	14
German measles	2
Measles	11

WASHINGTON—continued

	Cases
Mumps	10
Scarlet fever	18
Smallpox	19
Tuberculosis	5
Typhoid fever	4
Whooping cough	3

WEST VIRGINIA

Chicken pox	5
Diphtheria	19
Influenza	4
Measles	11
Poliomyelitis—Marion County	1
Scarlet fever	27
Smallpox	3
Trachoma	1
Tuberculosis	7
Typhoid fever	59
Whooping cough	21

WISCONSIN

Milwaukee	
Chicken pox	8
Diphtheria	7
German measles	2
Influenza	2
Measles	1
Mumps	9
Pneumonia	1
Scarlet fever	8
Tuberculosis	15
Typhoid fever	1
Whooping cough	45
Scattering	
Chicken pox	3
Diphtheria	17
Influenza	5
Lethargic encephalitis	1
Measles	53
Mumps	7
Pneumonia	1
Poliomyelitis	2
Scarlet fever	16
Smallpox	2
Tuberculosis	8
Typhoid fever	10
Whooping cough	126

WYOMING

Paratyphoid fever	1
Scarlet fever	3
Typhoid fever	1

Reports for Week Ended September 11, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	1
Diphtheria	11
Pellagra	2
Pneumonia	7
Scarlet fever	6
Tuberculosis	9
Typhoid fever	1
Whooping cough	1

NORTH DAKOTA

	Cases
Chicken pox	3
German measles	2
Measles	11
Mumps	4
Paratyphoid fever	3
Poliomyelitis	1
Scarlet fever	29
Tuberculosis	1

NORTH DAKOTA—continued

	Cases
Typhoid fever	5
Whooping cough	21

SOUTH CAROLINA

	Cases
Chicken pox	12
Dengue	14
Diphtheria	64
Hookworm disease	47
Influenza	129
Malaria	483
Measles	10
Paratyphoid fever	14
Pellagra	70

SOUTH CAROLINA—continued

	Cases
Poliomyelitis	12
Scarlet fever	5
Smallpox	13
Tuberculosis	45
Typhoid fever	112
Whooping cough	33

WYOMING

	Cases
Chicken pox	1
Diphtheria	1
Mumps	1
Paratyphoid fever	1
Tularaemia—Park County	1
Whooping cough	7

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
July, 1926										
Delaware		4		6	20		0	10	0	5
August, 1926										
Indiana	1	73	23		115		2	119	73	85
Iowa		59			20		2	54	20	35
New Jersey	4	163	17	1	126		5	123	0	80
Tennessee	4	46	17	300	84	49	4	72	9	807
Wisconsin	8	106	34		901		5	146	3	11

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended September 4, 1926, 38 States reported 819 cases of diphtheria For the week ended September 5, 1925, the same States reported 835 cases of this disease Ninety-six cities, situated in all parts of the country and having an aggregate population of more than 29,600,000, reported 429 cases of diphtheria for the week ended September 4, 1926. Last year for the corresponding week they reported 392 cases. The estimated expectancy for these cities was 559 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles—Thirty-seven States reported 626 cases of measles for the week ended September 4, 1926, and 268 cases of this disease for the week ended September 5, 1925. Ninety-six cities reported 142 cases of measles for the week this year and 123 cases last year.

Poliomyelitis.—The health officers of 38 States reported 119 cases of poliomyelitis for the week ended September 4, 1926. The same States reported 312 cases for the week ended September 5, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-eight States—this year, 752 cases; last year, 693 cases; 96

cities—this year, 295 cases; last year, 300 cases; estimated expectancy, 256 cases

Smallpox—For the week ended September 4, 1926, 38 States reported 119 cases of smallpox Last year for the corresponding week they reported 88 cases Ninety-six cities reported smallpox for the week as follows: 1926, 14 cases, 1925, 27 cases, estimated expectancy, 21 cases No deaths from smallpox were reported by these cities for the week this year

Typhoid fever—One thousand one hundred and eighty-two cases of typhoid fever were reported for the week ended September 4, 1926, by 38 States. For the corresponding week of 1925 the same States reported 1,118 cases of this disease Ninety-six cities reported 234 cases of typhoid fever for the week this year and 218 cases for the corresponding week last year. The estimated expectancy for these cities was 247 cases

Influenza and pneumonia—Deaths from influenza and pneumonia were reported for the week by 92 cities, with a population of about 29,100,000, as follows. 1926, 304 deaths, 1925, 397 deaths.

City reports for week ended September 4, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	0	0	0	0	0	0	0	2
New Hempshire									
Concord	22,546	0	0	0	0	0	1	0	0
Manchester	83,097	0	1	0	0	0	0	0	0
Vermont									
Barre	10,008	1	0	0	0	0	0	0	0
Burlington	24,089	0	0	0	0	0	0	0	0
Massachusetts									
Boston	779,620	6	31	9	1	0	7	9	9
Fall River	128,993	1	1	1	0	0	0	1	1
Springfield	142,065	0	2	0	0	0	0	0	0
Worcester	190,757	1	3	0	0	0	1	0	1
Rhode Island									
Pawtucket	69,760	------	0	------	------	------	------	------	------
Providence	267,918	0	3	0	0	0	1	0	4
Connecticut									
Bridgeport	(1)	0	4	0	0	0	0	0	1
Hartford	160,197	0	4	0	1	0	2	0	1
New Haven	178,927	2	2	1	0	0	2	0	1

[1] No estimate made.

City reports for week ended September 4, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia deaths reported
MIDDLE ATLANTIC									
New York:									
Buffalo	538,016	0	12	1	--------	0	2	1	3
New York	5,873,356	0	98	74	14	2	9	17	57
Rochester	316,786	0	5	6	--------	0	3	0	4
Syracuse	182,003	4	3	0	--------	0	11	0	1
New Jersey:									
Camden	128,642	0	0	1	0	0	0	0	2
Newark	452,513	2	7	2	0	0	1	2	5
Trenton	132,020	0	2	2	0	0	0	0	1
Pennsylvania:									
Philadelphia	1,979,364	4	34	26	--------	1	2	2	37
Pittsburgh	631,563	3	15	7	--------	1	6	0	8
Reading	112,707	0	2	0	--------	0	0	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409,333	0	7	0	0	1	0	3	2
Cleveland	936,485	0	21	30	0	1	1	4	9
Columbus	279,836	1	2	4	0	2	1	0	1
Toledo	287,380	1	6	5	0	0	2	0	2
Indiana:									
Fort Wayne	97,846	0	2	3	0	0	0	0	0
Indianapolis	358,819	0	6	1	0	0	0	0	7
South Bend	80,091	0	1	1	0	0	3	0	1
Terre Haute	71,071	0	1	0	0	0	0	0	0
Illinois:									
Chicago	2,995,239	12	59	48	0	1	23	14	18
Peoria	81,564	0	1	0	0	0	3	0	2
Springfield	63,923	2	1	1	0	0	2	0	0
Michigan:									
Detroit	1,245,824	4	28	46	4	1	1	2	7
Flint	130,316	2	5	1	0	0	2	0	1
Grand Rapids	153,698	0	2	0	0	0	1	0	0
Wisconsin:									
Kenosha	50,891	0	0	0	0	0	2	0	0
Madison	46,385	0	0	3	0	0	0	0	0
Milwaukee	509,192	1	10	5	0	0	8	2	4
Racine	67,707	0	0	0	0	0	2	1	0
Superior	39,671	0	0	5	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	110,502	0	2	0	0	0	0	0	1
Minneapolis	425,435	6	15	19	0	0	0	1	3
St. Paul	246,001	1	12	1	0	0	3	0	4
Iowa:									
Davenport	52,469	0	1	0	0	--------	0	0	--------
Sioux City	76,411	2	1	0	0	--------	0	0	--------
Waterloo	36,771	0	1	0	0	--------	1	0	--------
Missouri:									
Kansas City	367,481	0	4	0	1	1	1	0	5
St. Joseph	78,342	1	1	0	0	0	0	0	1
St. Louis	821,543	1	18	11	0	0	0	4	--------
North Dakota:									
Fargo	26,403	0	0	0	0	0	0	0	1
Grand Forks	14,811	0	0	0	0	--------	2	0	--------
South Dakota:									
Aberdeen	15,036	0	1	0	0	--------	1	0	--------
Sioux Falls	30,127	--------	0	--------	--------	--------	--------	--------	--------
Nebraska:									
Lincoln	60,941	0	0	0	0	0	0	0	1
Omaha	211,768	0	8	1	0	0	0	0	1
Kansas:									
Topeka	55,411	0	1	0	0	1	0	0	0
Wichita	88,367	0	1	1	0	0	0	0	1

[1] No estimate made.

City reports for week ended September 4, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	1	0	0	0	0	0	1
Maryland									
Baltimore	796,296	2	13	14	0	0	0	1	13
Cumberland	33,741	0	0	0	0	0	0	0	1
Frederick	12,035	0	0	0	0	0	0	0	1
District of Columbia									
Washington	497,906	0	4	7	0	0	0	0	4
Virginia									
Lynchburg	30,395	0	1	0	0	0	0	0	0
Norfolk	(1)	0	1	0	0	0	0	0	3
Richmond	186,403	0	9	8	0	0	2	2	0
Roanoke	58,208	0	3	0	0	0	1	0	0
West Virginia									
Charleston	49,019	0	2	1	0	0	1	0	0
Huntington	63,485	0	1	1	0	--------	0	0	--------
Wheeling	56,208	0	1	0	0	0	0	0	0
North Carolina									
Raleigh	30,371	0	1	1	0	0	0	0	0
Wilmington	37,061	0	1	0	0	0	0	0	1
Winston-Salem	69,031	0	2	1	0	0	0	0	0
South Carolina									
Charleston	73,125	0	1	2	6	0	1	0	0
Columbia	41,225	0	1	0	0	0	0	0	0
Greenville	27,311	0	1	1	0	0	0	0	0
Georgia									
Atlanta	(1)	0	4	2	0	0	0	1	6
Brunswick	16,809	0	0	0	0	0	0	0	0
Savannah	93,134	0	1	0	2	0	0	0	0
Florida									
Miami	69,754	0	--------	2	0	0	1	1	1
St. Petersburg	26,847	--------	0	--------	--------	0	--------	--------	0
Tampa	94,743	0	1	0	0	0	0	0	4
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	0	1	0	0	0	0	1
Louisville	305,935	0	4	3	1	1	0	0	3
Tennessee									
Memphis	174,533	0	4	1	0	1	0	0	1
Nashville	136,220	1	1	0	0	0	0	0	4
Alabama									
Birmingham	205,670	0	4	3	0	0	6	2	1
Mobile	65,955	0	1	0	0	1	0	0	0
Montgomery	46,481	0	1	0	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	1	0	0	--------	0	0	--------
Little Rock	74,216	0	0	0	0	0	0	0	1
Louisiana									
New Orleans	414,493	1	7	6	1	1	0	0	5
Shreveport	57,857	0	0	0	0	0	0	0	0
Oklahoma									
Oklahoma City	(1)	0	1	0	2	0	0	0	1
Texas									
Dallas	194,450	1	4	2	0	0	0	0	2
Galveston	48,375	0	0	0	0	0	0	0	0
Houston	164,954	0	2	5	0	1	0	0	1
San Antonio	198,069	0	1	1	0	0	0	0	2
MOUNTAIN									
Montana									
Billings	17,971	0	0	0	0	0	0	0	0
Great Falls	29,883	1	0	0	0	0	0	0	0
Helena	12,037	0	0	0	0	0	0	0	1
Missoula	12,668	0	0	0	0	0	0	0	1
Idaho:									
Boise	23,042	0	0	0	0	0	0	0	0

[1] No estimate made.

City reports for week ended September 4, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MOUNTAIN—continued									
Colorado									
Denver	280,911	4	9	5	------	1	1	1	3
Pueblo	43,787	0	4	0	0	0	0	0	0
New Mexico									
Albuquerque	21,000	0	1	0	0	0	0	0	0
Arizona									
Phoenix	38,669	0	0	1	0	0	0	0	0
Utah									
Salt Lake City	130,948	2	2	5	0	0	3	0	2
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	6	3	2	0	------	0	1	------
Spokane	108,897	0	1	0	0	------	1	0	------
Tacoma	104,455	1	2	3	0	0	0	0	2
Oregon									
Portland	282,383	1	4	3	0	0	4	2	5
California									
Los Angeles	(1)	2	22	22	5	0	3	1	10
Sacramento	72,260	0	2	5	0	0	0	1	3
San Francisco	557,530	14	13	18	0	0	30	6	7

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine											
Portland	0	2	0	0	0	0	1	0	0	5	25
New Hampshire:											
Concord	0	0	0	0	0	1	0	0	0	1	8
Manchester	1	1	0	0	0	1	0	0	0	0	23
Vermont:											
Barre	0	0	0	0	0	0	0	0	0	0	3
Burlington	0	0	0	0	0	1	0	0	0	2	8
Massachusetts											
Boston	12	14	0	0	0	15	5	2	1	42	188
Fall River	1	2	0	0	0	8	2	1	0	2	31
Springfield	2	1	0	0	0	2	0	1	0	3	22
Worcester	2	2	0	0	0	0	0	0	0	3	41
Rhode Island											
Pawtucket	0	------	0	------	------	------	0	------	------	------	------
Providence	2	1	0	0	0	3	2	0	0	7	50
Connecticut											
Bridgeport	2	1	0	0	0	2	1	0	0	1	16
Hartford	1	1	0	0	0	2	2	1	0	1	29
New Haven	2	1	0	0	0	1	4	0	0	3	38
MIDDLE ATLANTIC											
New York											
Buffalo	4	3	0	0	0	14	3	0	0	10	116
New York	23	22	0	1	0	[2] 76	47	52	7	47	1,092
Rochester	3	0	0	0	0	1	2	2	0	11	58
Syracuse	3	0	0	0	0	1	1	1	0	9	44
New Jersey:											
Camden	0	4	0	0	0	0	1	1	0	2	22
Newark	4	1	0	0	0	11	2	1	0	39	92
Trenton	0	2	0	0	0	2	2	0	0	3	22

[1] No estimate made.

[2] Pulmonary tuberculosis only.

City reports for week ended September 4, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
MIDDLE ATLANTIC—continued											
Pennsylvania											
Philadelphia	15	16	0	0	0	27	13	9	1	46	445
Pittsburgh	9	3	0	0	0	3	4	2	0	51	132
Reading	0	0	0	0	0	2	2	1	0	10	35
EAST NORTH CENTRAL											
Ohio											
Cincinnati	3	3	1	0	0	5	3	4	0	8	107
Cleveland	8	14	0	0	0	19	5	5	1	69	181
Columbus	2	4	1	0	0	8	2	1	1	4	80
Toledo	5	3	0	0	0	4	3	4	1	16	65
Indiana											
Fort Wayne	1	2	0	0	0	3	1	9	1	0	27
Indianapolis	3	1	0	0	0	2	2	1	2	12	123
South Bend	1	1	0	0	0	0	0	0	0	0	11
Terre Haute	1	0	0	0	0	2	0	0	0	2	22
Illinois											
Chicago	23	19	1	0	0	47	8	4	1	63	601
Peoria	2	0	0	0	0	1	0	0	0	0	14
Springfield	1	2	0	0	0	1	1	0	0	4	22
Michigan											
Detroit	24	24	1	0	0	25	5	4	2	58	256
Flint	3	4	0	0	0	2	1	0	0	2	29
Grand Rapids	2	3	0	0	0	1	1	1	0	2	21
Wisconsin											
Kenosha	1	0	0	0	0	0	0	0	0	14	8
Madison	1	1	1	0	0	0	0	0	0	5	5
Milwaukee	8	8	1	0	0	4	1	1	0	66	92
Racine	1	0	0	0	0	0	0	0	0	3	7
Superior	1	0	1	0	0	0	0	0	0	0	6
WEST NORTH CENTRAL											
Minnesota											
Duluth	3	5	0	0	0	1	1	0	0	2	17
Minneapolis	11	26	1	0	0	3	2	2	0	1	98
St Paul	4	8	1	0	0	3	1	2	0	16	61
Iowa											
Davenport	0	0	0	1	--------	-------	0	0	--------	1	--------
Sioux City	1	0	0	0	--------	-------	0	1	--------	3	--------
Waterloo	1	0	0	0	--------	-------	0	0	--------	0	--------
Missouri											
Kansas City	2	3	0	0	0	6	3	2	0	6	92
St Joseph	0	1	0	0	0	1	0	1	0	0	26
St Louis	8	15	0	0	0	12	7	12	1	15	203
North Dakota											
Fargo	0	3	0	0	0	1	0	0	0	0	10
Grand Forks	0	1	0	0	--------	-------	0	0	--------	0	--------
South Dakota											
Aberdeen	1	0	0	0	--------	-------	0	0	--------	4	--------
Sioux Falls	0	-------	0	--------	--------	-------	0	--------	--------	--------	--------
Nebraska											
Lincoln	0	0	1	1	0	0	1	1	0	6	11
Omaha	1	2	1	0	0	3	1	1	0	0	48
Kansas											
Topeka	1	0	0	0	0	1	2	0	0	5	18
Wichita	1	2	0	0	0	0	2	0	0	6	22
SOUTH ATLANTIC											
Delaware											
Wilmington	0	0	0	0	0	3	1	0	0	0	23
Maryland											
Baltimore	6	3	0	0	0	9	10	19	4	63	181
Cumberland	1	0	0	0	0	0	1	0	0	0	8
Frederick	0	0	0	0	0	0	1	0	0	0	3
District of Columbia											
Washington	3	6	1	0	0	6	5	3	0	11	99

City reports for week ended September 4, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
SOUTH ATLANTIC—continued											
Virginia											
Lynchburg	0	0	0	0	0	0	0	0	0	0	8
Norfolk	0	2	0	0	0	1	2	2	0	2	--------
Richmond	3	2	0	1	0	1	3	5	0	0	47
Roanoke	0	0	0	0	0	1	3	0	2	1	16
West Virginia											
Charleston	1	2	0	0	0	1	2	1	0	2	19
Huntington	1	0	0	0	--------	--------	1	0	--------	0	--------
Wheeling	2	0	0	0	0	1	1	1	0	0	20
North Carolina											
Raleigh	1	0	0	0	0	0	1	0	0	8	7
Wilmington	0	0	0	0	0	1	0	0	1	2	10
Winston-Salem	1	1	0	0	0	0	2	1	0	0	16
South Carolina											
Charleston	1	0	0	0	0	1	3	4	0	0	24
Columbia	0	0	0	0	0	0	1	0	0	2	--------
Greenville	0	0	0	3	0	0	0	0	0	2	6
Georgia											
Atlanta	3	4	0	1	0	8	5	10	2	7	60
Brunswick	0	0	0	0	0	1	1	0	0	0	4
Savannah	0	0	0	0	0	3	1	2	0	0	41
Florida:											
Miami	--------	1	--------	0	0	2	--------	1	0	0	40
St Petersburg	0	--------	0	--------	0	0	0	--------	0	--------	1
Tampa	0	0	0	0	0	3	1	1	1	0	37
EAST SOUTH CENTRAL											
Kentucky:											
Covington	0	0	0	0	0	1	1	0	0	0	19
Louisville	1	5	1	0	0	6	5	4	0	5	75
Tennessee											
Memphis	1	0	0	0	0	1	7	6	1	14	65
Nashville	2	4	0	0	0	2	7	18	5	2	53
Alabama											
Birmingham	4	1	0	1	0	2	7	5	0	2	59
Mobile	0	0	0	0	0	0	1	1	0	0	9
Montgomery	0	1	0	1	0	0	1	0	0	0	24
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	0	0	0	--------	--------	0	0	--------	1	--------
Little Rock	0	0	0	0	0	5	3	0	0	0	--------
Louisiana:											
New Orleans	1	1	0	0	0	7	5	4	4	1	116
Shreveport	0	1	0	0	0	0	5	0	1	0	12
Oklahoma											
Oklahoma City	1	0	0	0	0	2	2	2	0	0	27
Texas:											
Dallas	1	2	0	1	0	4	3	3	1	4	37
Galveston	0	0	0	0	0	1	0	0	0	0	11
Houston	1	0	0	0	0	1	1	0	0	42	39
San Antonio	0	2	0	0	0	5	0	3	1	0	36
MOUNTAIN											
Montana:											
Billings	0	0	1	0	0	0	0	0	0	0	8
Great Falls	0	1	0	0	0	0	1	0	0	0	7
Helena	0	0	0	0	0	0	0	0	0	0	5
Missoula	0	0	0	0	0	0	0	0	0	0	8
Idaho:											
Boise	0	0	1	0	0	0	0	0	0	0	4
Colorado:											
Denver	3	7	1	0	0	14	4	0	0	0	78
Pueblo	0	0	0	0	0	1	1	0	0	0	12
New Mexico:											
Albuquerque	0	0	0	0	0	3	1	0	0	0	13

City reports for week ended September 4, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
MOUNTAIN—contd											
Arizona											
Phoenix	------	0	0	0	0	5	0	0	0	0	11
Utah											
Salt Lake City	1	1	0	0	0	2	2	1	0	17	27
Nevada											
Reno	0	0	0	0	0	0	1	0	0	0	2
PACIFIC											
Washington											
Seattle	4	1	1	0	------	------	2	0	------	6	------
Spokane	3	1	0	0	------	------	0	2	------	2	------
Tacoma	2	2	1	4	0	1	0	6	1	1	20
Oregon											
Portland	2	6	4	4	0	2	1	0	0	1	51
California											
Los Angeles	6	16	2	1	0	20	4	3	0	6	200
Sacramento	0	1	1	0	0	1	1	3	2	0	27
San Francisco	5	5	1	0	0	8	2	3	0	2	145

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis: Cases	Poliomyelitis: Deaths
NEW ENGLAND									
New Hampshire									
Manchester	0	0	0	0	0	0	0	0	1
Massachusetts									
Boston	2	1	1	1	0	0	2	0	0
Springfield	0	0	1	1	0	0	0	3	0
Worcester	0	0	0	0	1	0	0	0	0
Rhode Island									
Providence	0	0	0	0	0	0	0	1	0
MIDDLE ATLANTIC									
New York									
New York	4	2	5	0	0	0	8	2	1
Rochester	0	0	1	1	0	0	0	0	0
Syracuse	0	0	0	0	0	0	0	8	2
New Jersey									
Camden	0	0	0	0	0	0	0	1	0
Pennsylvania									
Philadelphia	0	0	0	0	0	0	1	0	1
EAST NORTH CENTRAL									
Ohio									
Cleveland	2	1	0	0	0	0	1	2	0
Toledo	0	0	1	0	0	0	0	0	0
Illinois									
Chicago [1]	1	0	0	0	1	1	5	0	0
Michigan									
Detroit	0	0	1	1	0	0	1	0	0
Wisconsin									
Milwaukee	0	0	0	0	0	0	0	1	1

[1] Typhus fever; 1 case and 1 death at Chicago, Ill.

City reports for week ended September 4, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
WEST NORTH CENTRAL									
Missouri									
St Louis	0	0	0	0	0	0	1	1	0
Nebraska									
Omaha	0	0	0	0	0	0	0	1	0
Kansas									
Topeka	1	1	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	1	0
SOUTH ATLANTIC									
Maryland									
Baltimore	2	0	5	2	0	0	1	5	0
West Virginia									
Wheeling	0	0	0	0	0	0	0	1	1
North Carolina									
Wilmington	0	0	0	0	0	1	0	0	0
Winston-Salem	0	0	0	0	1	0	1	0	0
South Carolina									
Charleston	0	0	0	0	1	0	0	0	0
Florida									
Tampa	0	0	0	0	0	1	0	0	0
EAST SOUTH CENTRAL									
Tennessee									
Memphis	0	0	0	0	1	2	0	0	0
Alabama									
Birmingham	0	0	0	0	1	1	0	0	0
Mobile	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	2	0	0	0
Louisiana									
New Orleans	0	0	1	1	0	0	0	0	0
Shreveport	0	0	0	0	0	1	0	0	0
Texas									
Houston	0	0	0	0	0	1	0	0	0
MOUNTAIN									
Utah									
Salt Lake City	0	0	0	0	0	0	0	1	0
PACIFIC									
California									
Los Angeles	0	0	0	0	0	0	0	0	1
Sacramento	0	1	0	0	0	0	0	0	0
San Francisco	0	0	0	0	0	0	1	1	0

The following table gives the rates per 100,000 population for 102 cities for the five-week period ended September 4, 1926, compared with those for a like period ended September 5, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 102 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 96 cities reporting deaths had more than 29,250,000 estimated population in 1925 and more than 29,750,000 in 1926. The number of cities included in each

group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, August 1 to September 4, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925[1]

DIPHTHERIA CASE RATES

	Week ended—									
	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926
102 cities	[2] 83	[3] 78	77	[3] 69	68	[4] 68	[5] 72	[3] 65	[6] 70	[7] 75
New England	79	40	89	31	50	47	41	50	43	[8] 27
Middle Atlantic	83	88	78	62	73	59	63	56	61	[9] 62
East North Central	94	[10] 105	68	[10] 101	51	[10] 87	68	[10] 75	57	101
West North Central	[11] 105	[12] 52	107	[12] 56	99	[12] 83	115	[12] 81	99	[13] 67
South Atlantic	52	43	69	49	60	60	[5] 68	62	106	[14] 70
East South Central	26	10	32	57	58	21	37	57	32	42
West South Central	22	39	18	26	57	[15] 66	92	34	31	60
Mountain	[16] 66	118	157	73	74	146	166	73	305	91
Pacific	141	102	80	105	110	62	105	92	[6] 76	135

MEASLES CASE RATES

	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926
102 cities	[2] 51	[3] 66	46	[3] 57	30	[4] 41	[5] 27	[3] 27	[6] 22	[7] 25
New England	127	83	125	69	93	52	86	38	50	[8] 34
Middle Atlantic	69	42	57	33	38	27	34	15	25	[9] 17
East North Central	44	[10] 96	35	[10] 77	21	[10] 60	20	[10] 32	20	30
West North Central	[11] 10	[12] 58	24	[12] 66	6	[12] 28	4	[12] 20	6	[13] 8
South Atlantic	42	47	40	81	33	36	[5] 23	15	23	[14] 0
East South Central	11	42	16	31	5	36	11	36	0	31
West South Central	0	9	9	4	9	[15] 9	0	4	0	0
Mountain	[16] 19	137	18	64	28	18	28	27	0	36
Pacific	28	121	19	94	11	78	6	94	[6] 26	92

SCARLET FEVER CASE RATES

	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926
102 cities	[2] 51	[3] 61	57	[3] 51	51	[4] 48	[5] 45	[3] 55	[6] 54	[7] 52
New England	98	104	81	69	89	73	67	54	46	[8] 61
Middle Atlantic	33	38	36	30	23	29	27	32	30	[9] 25
East North Central	48	[10] 79	54	[10] 56	54	[10] 47	45	[10] 55	58	59
West North Central	[11] 117	[12] 101	129	[12] 119	143	[12] 119	109	[12] 133	121	[13] 133
South Atlantic	21	39	38	30	40	39	[5] 39	58	56	[14] 38
East South Central	58	31	37	47	32	36	26	62	131	57
West South Central	53	17	66	22	48	[15] 18	18	26	35	26
Mountain	[16] 38	64	92	36	65	36	28	64	74	82
Pacific	61	84	83	86	41	78	66	75	[6] 50	70

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported Populations used are estimated as of July 1, 1925, and 1926, respectively.
[2] Waterloo, Iowa, and Helena, Mont., not included
[3] Madison, Wis , and Sioux Falls, S Dak , not included
[4] Madison, Wis , Sioux Falls, S Dak., and Fort Smith, Ark , not included.
[5] Greenville, S C , not included
[6] Spokane, Wash , not included
[7] Pawtucket, R I , Buffalo, N Y , Waterloo, Iowa, Sioux Falls, S. Dak., and Brunswick, Ga , not included
[8] Pawtucket, R I , not included.
[9] Buffalo, N Y , not included
[10] Madison, Wis , not included
[11] Waterloo, Iowa, not included
[12] Sioux Falls, S Dak , not included
[13] Waterloo, Iowa, and Sioux Falls, S Dak , not included.
[14] Brunswick, Ga., not included
[15] Fort Smith, Ark., not included
[16] Helena, Mont , not included.

Summary of weekly reports from cities, August 1 to September 4, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

SMALLPOX CASE RATES

	Week ended—									
	Aug 8, 1925	Aug 7, 1926	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept. 4, 1926
102 cities	[2] 9	[3] 8	7	[3] 7	6	[4] 2	[5] 8	[1] 4	[6] 5	[7] 2
New England	0	0	0	0	0	0	0	0	0	[8] 0
Middle Atlantic	0	1	0	0	0	1	1	0	0	[9] 1
East North Central	6	[10] 9	3	[10] 1	2	[10] 2	8	[10] 7	5	0
West North Central	[11] 8	[12] 14	16	[12] 4	6	[12] 4	4	[12] 0	4	[13] 0
South Atlantic	2	11	2	11	4	6	[5] 12	9	2	[14] 0
East South Central	47	16	21	26	37	5	53	0	11	10
West South Central	13	13	9	22	4	[15] 0	13	9	4	4
Mountain	[16] 19	9	9	73	9	0	9	0	9	0
Pacific	64	24	64	32	41	5	28	13	[6] 38	13

TYPHOID FEVER CASE RATES

102 cities	[2] 40	[3] 29	46	[3] 35	55	[4] 41	[5] 45	[3] 40	[6] 38	[7] 41
New England	26	12	38	17	31	17	26	19	29	[8] 12
Middle Atlantic	23	19	33	24	44	34	30	39	29	[9] 36
East North Central	20	[10] 12	17	[10] 19	29	[10] 17	26	[10] 18	17	20
West North Central	[11] 41	[12] 18	55	[12] 24	46	[12] 48	34	[12] 42	22	[13] 43
South Atlantic	56	66	86	100	104	94	[5] 89	56	58	[14] 93
East South Central	252	182	200	140	168	187	163	233	168	176
West South Central	123	60	97	47	128	[15] 44	106	39	167	43
Mountain	[16] 104	27	102	73	102	73	111	18	28	9
Pacific	17	30	41	30	61	24	52	38	[6] 29	46

INFLUENZA DEATH RATES

96 cities	[16] 2	[3] 2	2	[3] 1	2	[3] 3	[5] 3	[3] 3	2	[17] 3
New England	5	0	0	0	0	0	0	0	0	[8] 0
Middle Atlantic	2	2	3	1	2	1	3	3	3	[9] 2
East North Central	3	[10] 1	3	[10] 0	1	[10] 3	4	[10] 3	3	4
West North Central	0	[12] 0	0	[12] 2	0	[12] 2	2	[12] 8	2	[12] 4
South Atlantic	6	4	0	0	0	2	[5] 2	2	2	[14] 0
East South Central	5	0	5	10	11	0	5	0	0	16
West South Central	5	5	0	14	10	28	15	5	5	9
Mountain	[16] 0	9	9	0	9	0	9	18	18	9
Pacific	0	11	0	0	7	7	0	0	0	0

PNEUMONIA DEATH RATES

96 cities	[16] 52	[3] 54	60	[3] 50	53	[3] 54	[5] 61	[3] 48	70	[17] 51
New England	36	54	29	31	38	40	41	33	53	[8] 40
Middle Atlantic	65	56	73	62	65	58	65	56	84	[9] 60
East North Central	36	[10] 42	47	[10] 35	40	[10] 34	50	[10] 38	59	34
West North Central	51	[12] 51	42	[12] 25	30	[12] 49	53	[12] 42	32	[13] 36
South Atlantic	50	68	73	56	60	86	[5] 80	58	54	[14] 64
East South Central	63	52	58	52	74	36	63	47	131	52
West South Central	68	104	82	113	77	71	106	76	73	52
Mountain	[16] 28	64	55	82	65	82	74	73	83	64
Pacific	69	57	80	39	47	78	62	21	95	78

[2] Waterloo, Iowa, and Helena, Mont., not included
[3] Madison, Wis., and Sioux Falls, S Dak., not included
[4] Madison, Wis, Sioux Falls, S Dak, and Fort Smith, Ark, not included.
[5] Greenville, S C., not included
[6] Spokane, Wash, not included
[7] Pawtucket, R I., Buffalo, N Y, Waterloo, Iowa, Sioux Falls, S Dak, and Brunswick, Ga, not included.
[8] Pawtucket, R I, not included.
[9] Buffalo, N Y, not included.
[10] Madison, Wis, not included
[11] Waterloo, Iowa, not included
[12] Sioux Falls, S Dak, not included
[13] Waterloo, Iowa, and Sioux Falls, S. Dak., not included
[14] Brunswick, Ga., not included.
[15] Fort Smith, Ark, not included
[16] Helena, Mont., not included
[17] Pawtuckett, R. I, Buffalo, N Y, Sioux Falls, S. Dak, and Brunswick, Ga, not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	102	96	29,930,185	30,458,186	29,251,658	29,764,201
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	13	11	2,580,151	2,619,719	2,461,380	2,499,036
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	933,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended August 28, 1926.—The following report for the week ended August 28, 1926, was transmitted by the far eastern bureau of the health section of the secretariat of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague Cases	Plague Deaths	Cholera Cases	Cholera Deaths	Smallpox Cases	Smallpox Deaths
Egypt: Alexandria	0	0	0	0	3	1
British India						
Madras	----	0	----	0	8	4
Vizagapatam	----	0	----	0	1	0
Rangoon	----	2	----	1	7	4
Tuticorin	----	0	----	0	2	0
Siam Bangkok	0	0	2	0	7	2
Dutch East Indies						
Cheribon [1]	0	0	0	0	0	0

Maritime towns	Plague Cases	Plague Deaths	Cholera Cases	Cholera Deaths	Smallpox Cases	Smallpox Deaths
China						
Amoy	0	0	16	----	0	0
Shanghai	0	0	100	32	0	0
Manchuria Harbin	0	0	66	17	0	0
Kwantung:						
Dairen	0	0	1	1	0	0
Port Arthur	0	0	2	0	0	0
Japan: Yokohama	0	0	1	0	0	0

[1] Two infected rats were found in the port during the week.

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia—Aden.
Iraq.—Basra
British India—Calcutta, Bombay, Karachi, Chittagong, Cochin, Negapatam.
Ceylon—Colombo.
Federated Malay States—Port Swettenham.
Straits Settlements.—Penang, Singapore.
Dutch East Indies.—Batavia, Surabaya, Samarang, Belawan-Deli, Palembang, Sabang, Makassar, Banjermasin, Balik-Papan, Tarakan, Padang, Samarinda.
Sarawak.—Kuching
British North Borneo—Sandakan, Jesselton, Kudat, Tawao.
Portuguese Timor—Dilly.
Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.
French Indo-China—Saigon and Cholon, Turane, Haiphong.
China.—Hongkong
Formosa.—Keelung.
Japan.—Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki
Korea—Chemulpo, Fusan.
Manchuria.—Antung, Mukden, Changchun.
U. S. S. R.—Vladivostok.

AUSTRALASIA AND OCEANIA

Australia—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island
New Guinea—Port Moresby
New Zealand—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia—Noumea.
Fiji—Suva
Hawaii—Honolulu

AFRICA

Egypt—Port Said, Suez.
Anglo-Egyptian Sudan—Port Sudan, Suakin.
Eritrea—Massaua
French Somaliland—Jibuti
British Somaliland—Berbera
Italian Somaliland—Mogadiscio
Kenya—Mombasa
Zanzibar—Zanzibar.
Tanganyika—Dar-es-Salaam.
Seychelles—Victoria
Mauritius—Port Louis
Portuguese East Africa—Mozambique, Beira, Lourenço-Marques
Union of South Africa—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

Dutch East Indies—Pontianak, Menado
Madagascar—Tamatave, Majunga.

CANADA

Communicable diseases, week ended August 28, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the week ended August 28, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal meningitis				2		1		3
Influenza	10							10
Smallpox				2	4	5	1	12
Typhoid fever	1	6	17	15	6		12	57

Communicable diseases—Province of Ontario—August, 1926 (comparative).—During the month of August, 1926, communicable diseases were reported in the Province of Ontario, Canada, as follows:

Disease	August, 1926		August, 1925		Disease	August, 1926		August, 1925	
	Cases	Deaths	Cases	Deaths		Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis	4	1	6	2	Pneumonia		37		67
Chancroid	1		1		Poliomyelitis	19		5	
Chicken pox	133		136		Scarlet fever	141	2	106	
Diphtheria	244	10	258	13	Smallpox	7		17	
German measles	4		24		Syphilis	112		48	
Gonorrhea	112		107		Tuberculosis	133	44	95	79
Lethargic encephalitis	4	2			Typhoid fever	111	5	43	2
Measles	164		320		Whooping cough	305	10	256	8
Mumps	43		2						

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended September 24, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Nanking	July 25–Aug 7			Present
Shanghai	Aug 8–14	12	68	Cases, foreign, deaths, native and foreign
Swatow	Aug 1–7	6		
French Settlements in India	May 16–June 26	12	12	
India				July 11–17, 1926 Cases, 1,758; deaths, 1,029
Calcutta	July 25–Aug 7	53	43	
Rangoon	July 25–31	1	1	
Indo-China				
Saigon	July 18–24	1	1	
Philippine Islands				
Manila	July 25–31	1	1	Nonresident.
Siam				
Bangkok	July 18–31	15	8	
Straits Settlements				
Singapore	July 4–17	2	1	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria	July 1–20	1		
China				
Amoy	July 25–Aug 7	7		
Nanking	do			Present
India				July 11–17, 1926 Cases, 127; deaths, 74
Rangoon	July 25–31	8	7	
Indo-China				
Saigon	July 18–24	1	1	
Madagascar				
Province—				
Tananarive				June 16–30, 1926 Cases, 10; deaths, 9.
Town—				
Tananarive	June 16–30	1	1	
Siam:				
Bangkok	July 18–24	1	1	
Straits Settlements				
Singapore	July 4–17	1	1	
Syria.				
Beirut	Aug 1–10	1		
Tunisia	June 21–30	21		
Do	July 1–20	12		

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Bolivia				
La Paz	July 1–31	2	4	
Canada:				
Alberta				Aug 22–28, 1926 1 case.
Manitoba				Aug 22–28, 1926. Cases, 4.
Winnipeg	Aug 27–Sept 4	1		
Ontario				Aug 22–28, 1926 Cases, 2.
Saskatchewan				Aug 22–28, 1926 Cases, 5.
China				
Chungking	Aug 1–7			Prevalent
Foochow	Aug 1–14			Present
Manchuria—				
Dairen	July 19–Aug 8	2	1	
Nanking	July 25–Aug 7			Do
Swatow	Aug 1–7			Do.
Chosen	May 1–31	180	36	
Egypt				
Alexandria	July 23–Aug 5	8	1	
Cairo	Feb 26–Mar 4	2		
France	May 1–June 30	49		
French Settlements in India	May 16–June 26	77	77	
Gold Coast	May 1–31	36		

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended September 24, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Great Britain				
England and Wales				Aug 22-28, 1926 Cases, 90
Nottingham	July 18-24	1		
India				July 11-17, 1926 Cases, 2,735, deaths, 814
Bombay	Aug 1-7	7	3	
Calcutta	July 25-Aug 7	7	4	
Karachi	Aug 1-14	4	1	
Madras	Aug 8-14	5	3	
Italy				June 6-26, 1926 Cases, 8 June 27-July 10, 1926 Cases, 3
Jamaica	Aug 22-28	10		Reported as alastrim
Japan				May 30-June 19, 1926 Cases, 77
Taiwan	Aug 1-10	1		
Latvia				June 1-30, 1926 Cases, 2
Mexico	Apr 1-30		380	
Mexico City	Aug 22-28	1		Including municipalities in Federal district
San Luis Potosi	Aug 28-Sept 4		1	
Torreon	Aug 1-31		4	
Poland				June 27-July 24, 1926 Cases, 2, deaths, 1
Siam				
Bangkok	July 18-31	15	12	
Spain				
Valencia	Aug 22-28	1		
Straits Settlements				
Singapore	July 11-17	1		
Tripolitania	Apr 1-30	11		
Tunisia				
Tunis	Aug 11-20	2		

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Bulgaria	May 1-June 30	23	2	
China				
Antung	Aug 9-15	7		
Chosen				May 1-31, 1926 Cases, 247, deaths, 25
Seoul	July 1-31	7		
Czechoslovakia	June 1-30	2	1	
Egypt				
Alexandria	July 30-Aug 5	1		
Cairo	Feb 26-Mar 4	19	6	
Lithuania	June 1-30	27	1	
Mexico	Apr 1-30		37	
Mexico City	Aug 22-28	7		Including municipalities in Federal District
Morocco	June 1-30	12		
Palestine	Aug 10-16	2		
Poland	June 27-July 24	147	11	
Rumania	May 1-31	316	20	
Union of South Africa				
Natal	July 25-31	11		In native compounds

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Gold Coast	May 1-31	3	2	

Reports Received from June 26 to September 17, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18—May 29, 1926 Cases, 31, deaths, 29
China				
Shanghai	Reported July 20	35	8	
Do	July 25-Aug 1	8	189	Cases, foreign, deaths, native and foreign
Swatow	July 11-24		63	
Do	July 25-31	14		
Tsingtao	do		1	
French Settlements in India				Mar. 7-May 15, 1926 Cases, 19, deaths, 18

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 17, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
India				Apr 25-June 26, 1926 Cases, 18,526, deaths, 11,531 June 27-July 10, 1926 Cases, 3,365, deaths, 2,065.
Bombay	May 30-June 5	1	1	
Do	July 18-31	2	2	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-July 24	152	146	
Madras	May 16-June 5	2	1	
Do	Aug 1-7	1	1	
Rangoon	May 9-June 26	67	44	
Do	June 27-July 24	26	25	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-July 17	27	16	
Japan				
Yokohama	Aug 25	1		
Philippine Islands				
Manila	May 18-24	2	2	
Do	June 27-July 17	4	1	
Provinces—				
Albay	Apr 18-24	1	1	
Mindoro	Feb 21-Mar 6	3	3	
Romblon	Dec 14-31	42	43	
Do	Jan 2-23	16	12	
Siam				
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-July 10	54	22	
On vessel				
Steamship Macedonia	Aug 5	1		At Yokohama, Japan Vessel sailed from Singapore, July 18, 1926

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported
Bona	Aug 14	1		
Azores				
Fayal Island—				
Horta	Aug 2-8	1	1	
St Michaels Island	May 9-June 26	7	2	
British East Africa				
Kisumu	May 16-22	1	1	
Uganda	Mar 1-May 31	449	356	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	
China				
Amoy	Apr 18-June 26	40	30	
Do	June 27-July 24	21		
Foochow	June 6-July 31			Several cases. Not epidemic.
Nanking	May 9-July 24			Prevalent
Swatow	July 25-31	14		
Ecuador				
Guayaquil	May 16-June 30	6		Rats taken, 30,914; found infected, 31
Do	July 1-31			Rats taken, 20,166, found infected, 22
Egypt				Jan 1-July 22, 1926. Cases, 104
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 12	5	1	
Beni-Suef	May 23-June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 17, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
France				
Marseille	July 8	1	1	Reported July 24
St Denis	Reported Aug 2	1		Vicinity of Paris
St Ouen	Aug 14	2		Suburb of Paris
Great Britain				
Liverpool	Reported Sept 6		1	Several cases
Greece				
Athens	Apr 1-May 31	16	4	Including Piræus
Patras	May 27-June 12	4	1	
Do	July 25-Aug 7	5	2	
Zante	May 17	1		
Hawaii				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Paauhau	July 18-24			Plague-infected rat trapped
India				Apr 25-June 16, 1926 Cases, 53,001, deaths, 41,576 June 27-July 10, 1926 Cases, 420, deaths, 283
Bombay	May 2-June 23	16	15	
Do	July 18-31	2	2	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	102	93	
Do	July 4-24	80	33	
Rangoon	May 9-June 26	20	15	
Do	June 27-July 24	12	8	
Indo-China				
Saigon	May 23-June 26	8		
Iraq				
Baghdad	Apr 18-June 12	161	103	
Do	July 18-31	2	2	
Japan				
Yokohama	July 2-30	9	5	
Do	Aug 7	2		Total July 2-Aug 10, 1926 Cases, 9, deaths, 8
Java				
Batavia	Apr 24-June 19	65	65	
Do	June 20-July 23	27	26	
Cheribon	Apr 11-24	3	3	
East Java and Madoera	June 13-19	1	1	
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic
Moramanga Province	*Apr 1-15*	2	2	Do
Tananarive Province				Apr 1-June 15, 1926 Cases, 120; deaths, 111
Tamatave (Port)	May 16-31	1	1	
Tananarive Town	Apr 1-May 15	6	6	
Other localities	do	80	77	Bubonic, pneumonic, septicemic
Nigeria				Feb 1-Apr 30, 1926 Cases, 115; deaths, 92.
Peru				May-June, 1926 Cases, 57; deaths, 16.
Departments—				
Ancash	May 1-31			Present
Cajamarca	May 1-June 30	10	4	
Huancho	July 1-31	1		
Huaral	do	5	2	
Huarmey	do			Present
Ica	May 1-31	1		
Libertad	do	4		Pacasmayo, cases, 2, Trujillo district, cases, 2.
Lima	May 1-June 30	29	12	
Do	July 1-31	8	2	
Haciendas	do	7	3	
Piura	June 1-30	13		In Huancabamba district
Russia				Jan 1-Mar 31, 1926 Cases, 37
Senegal				Nov 1-30, 1926 Cases, 3, deaths, 2 Mar 1-Apr 30, 1926 Cases, 15, deaths, 4
Siam				
Bangkok	May 23-June 26	2	2	
Straits Settlements				
Singapore	May 2-8	1	1	
Syria				
Beirut	July 1-10	1		
Tunisia	May 11-June 20	150		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Turkey				
Constantinople	Aug 1-14	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 17, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-July 3	1		
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District—				
Protestpan	May 9-22	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	14		
Do	July 1-10	1		
Belgium				
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Brazil				
Bahia	June 20-26	1		
Do	June 27-July 31	19	14	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-July 31	14	8	
Pernambuco	July 11-17	1		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-31	508	235	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Canada				May 30-June 12, 1926. Cases, 46
Alberta	May 30-June 12	3		
Do	June 27-July 17	1		
British Columbia—				
Vancouver	Aug 16-22	2		
Manitoba	May 30-June 26	24		
Do	June 27-Aug 21	9		
Winnipeg	June 6-12	5	1	
Do	July 4-Aug 28	11		
Ontario				May 30-June 26, 1926 Cases, 36 June 27-Aug 21: Cases, 56.
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2	1	
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 25-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16 June 27-Aug 21 Cases, 38.
Regina	July 4-10	2		
Ceylon				Mar 14-May 29, 1926. Cases, 44, deaths, 3.
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Chungking	May 2-July 31			Present.
Foochow	do			Do.
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 17, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Manchuria	July 1-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-July 3	1		Do
Dairen	Apr 2[illegible]-June 20	69	16	
Do	June 28-July 18	3	2	
Fushun	May 16-June 5	4		Do
Harbin	May 14-June 30	21		Do
Do	July 1-28	12		
Kai-yuan	May 16-June 30	10		Do
Kungchuling	June 13-19	1		Do
Liao-yang	May 16-June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do
Ssupingkai	May 16-June 30	2		Do
Teshihchiao	do	2		Do
Wa-feng-tien	do	3		Do
Nanking	May 8-July 24			Present
Shanghai	May 2-June 26	10	25	Cases, foreign, deaths, population of international concession, foreign and native
Do	June 27-July 24	3	3	
Swatow	May 9-July 31			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanhsien	May 1			Prevalent
Chosen				Mar 1-Aug 30, 1926 Cases, 363, deaths, 85
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Aug 5	51		
Cairo	Jan 29-Feb 4	1	1	
Esthonia				May 1-June 30, 1926 Cases, 3
France				Mar 1-Apr 30, 1926 Cases, 92
St Etienne	Apr 18-June 15	7	3	
French Settlements in India	Mar 7-May 15	205	205	
Gold Coast	Mar 1-Apr 30	626	13	
Great Britain				
England and Wales				May 23-July 3, 1926 Cases, 1,068, July 4-Aug 21, 1926 Cases, 572
Bradford	May 23-29	1		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-17	1		
Nottingham	May 2-June 5	7		
Sheffield	June 13-19	1		
Do	July 4-Aug 7	2		
Greece				
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr 25-June 26, 1926 Cases, 54,851, deaths, 14,771. June 27-July 10, 1926. Cases, 6,899, deaths, 2,109
Bombay	May 2-June 26	220	134	
Do	June 27-July 31	78	41	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-26	24	18	
Do	June 27-July 24	18	17	
Karachi	May 16-June 26	44	18	
Do	June 27-July 31	9	5	
Madras	May 16-June 26	7	4	
Do	June 27-Aug 7	21	4	
Rangoon	May 9-June 26	10	5	
Do	July 4-24	3		
Indo-China				
Saigon	do	2		
Iraq				
Baghdad	May 9-June 26	8	3	
Do	July 4-10	1	1	
Basra	Apr 18-June 22	34	25	
Italy				Mar 28-June 5, 1926 Cases, 26
Catania	Aug. 9-15	2		
Rome	June 14-20	4		Entire consular district, including Island of Sardinia.
Jamaica				Apr. 25-June 26, 1926 Cases, 201. (Reported as alastrim.)
Do	June 27-July 31			June 27-July 31, 1926 Cases, 85. (Reported as alastrim.)

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 17, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Japan				Apr 11-May 29, 1926 Cases, 564.
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-31	1		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-June 25	2		Province
East Java and Madoera	Apr 11-July 3	100	6	
Do	July 4-17	28		
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Latvia				Apr 1-30, 1926 Cases, 3
Mexico				Feb 1-Mar 31, 1926 Deaths, 602
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-Aug 30		6	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
Do	July 25-Aug 21	3		Do
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-Aug 14		9	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Do	July 1-31		5	
Netherlands				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-Apr 30, 1926 Cases, 404, deaths, 33
Persia				
Teheran	Apr 21-May 21		7	
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May 31, 1926 Cases, 12, deaths, 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Aug 13	20	5	
Oporto	May 23-June 5	4		
Do	July 11-24	2		
Russia				Jan 1-Mar 31, 1926: Cases, 2,103
Siam				
Bangkok	May 2-June 12	23	20	
Do	July 4-17	24	23	
Straits Settlements				
Singapore	Apr 25-May 1	1		
Switzerland				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tunisia				Apr 1-June 30, 1926 Cases, 17.
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks.
Idutya district	May 23-29			Do
Orange Free State	June 20-July 3			Do
Natal	May 30-June 5			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Johannesburg	May 9-June 12	5		
Do	July 11-17	1		
Yugoslavia				Apr 15-30, 1926. Cases, 2; deaths, 1.
On vessel				Three cases, 1 death at Aden, Arabia, stated to have been imported by sea
S S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed. At Durban, Union of South Africa, June 16, 1926. One suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 17, 1926—Continued

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Argentina				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Bulgaria				Mar 1-Apr 30, 1926 Cases, 64, deaths, 12
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Valparaiso	Apr 29-May 5		1	
China				
Antung	June 14-27	7	1	
Do	June 28-Aug 1	17	1	
Canton	May 1-31	1		
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1-Apr 30, 1926 Cases, 640, deaths, 66
Chemulpo	May 1-June 30	38	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Czechoslovakia				Jan 1-May 31, 1926 Cases, 154, deaths, 4
Egypt				
Alexandria	July 16-22	1		
Port Said	June 4-24	4	1	
Do	July 9-15	3	1	
Cairo	Jan 29-Feb 25	55	11	
Do	July 23-Aug 5	1		
Great Britain				
Scotland—				
Glasgow	July 30-Aug 21	9	1	
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerr County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-May 8, 1926 Cases, 3
Japan				Mar 28-May 29, 1926 Cases, 37
Latvia				May 1-June 30, 1926 Cases, 19
Lithuania				Mar 1-May 31, 1926 Cases, 172, deaths, 21
Mexico				Feb 1-Mar 31, 1926 Deaths, 73.
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal district
Do	June 13-19	9		Do
Do	July 25-31	3		Do
Do	Aug 15-21	5		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-May 31, 1926 Cases, 414
Palestine				Mar 1-June 30, 1926 Cases, 14, deaths, 1
Gaza	July 6-12	1		
Haifa	July 13-19	1		
Jaffa District	June 15-28	5		
Majdal District	July 13-Aug 2	2		
Nazareth District	do	3		
Tiberias	Aug 3-9	1		
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85
Rumania				Mar 1-Apr 30, 1926 Cases, 395, deaths, 49
Russia				Jan 1-Mar 31, 1926 Cases, 14,814
Tunisia				Apr 1-June 30, 1926 Cases, 110.
Tunis	June 11-30	3		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 17, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Turkey				
Constantinople	June 16-22	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153; deaths, 19
Cape Province				Apr 1-May 31, 1926 Cases, 116; deaths, 15 Native
Do	May 31-June 30	49	5	
Glengray District	June 27-July 3			
Grahamstown	do	1		Sporadic
Natal				Apr 1-June 30, 1926 Cases, 28
Orange Free State				Apr 1-June 30, 1926 Cases, 24; deaths, 4
Do	July 18-24			Outbreaks
Transvaal				Apr 1-June 30, 1926 Cases, 10, deaths, 5
Walkkerstroom District	June 20-26			Outbreaks
Wolmaransstad District	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 48; deaths, 7 July 1-31, 1926 Cases, 2, deaths, 1
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr 1-10	3	1	

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TREASURY DEPARTMENT

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SPECIAL ARTICLES

Experimental Studies of Water Purification:

I. Description of Experimental Plant

II. Review of Results from Primary Experiments

WASHINGTON
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1926

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen B J LLOYD, *Chief of Division*

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CONTENTS

PUBLIC HEALTH REPORTS

VOL. 41 OCTOBER 1, 1926 NO. 40

EXPERIMENTAL STUDIES OF WATER PURIFICATION

I. DESCRIPTION OF EXPERIMENTAL WATER-PURIFICATION PLANT

By FREDERIC J MOSS, Assistant Sanitary Engineer, United States Public Health Service

In July, 1924, an experimental water-purification plant was put into operation on the grounds of the stream pollution investigations laboratory at Cincinnati, Ohio, and has been operated continuously since then up to the time of this writing, April 28, 1926 It is the purpose of this article to give a brief engineering description of this plant, which presents some interesting features and, it is believed, may serve as an example of the possibilities which exist for constructing highly efficient water-purification plants for small communities of less than 2,000 inhabitants

The primary object of constructing and operating this experimental plant was to provide a means whereby a detailed study could be made of the limits of raw-water pollution which are consistent with the production of effluents conforming to accepted standards of bacterial quality, having reference to water-purification plants of the type found along the Ohio River and on other similar inland river systems of the country serving as sources of purified municipal water supplies. Studies of stream pollution, which were begun actively by the Public Health Service in 1913, had shown the vital importance of establishing some scientific basis for fixing the permissible limits of pollution of streams at the various sources from which raw-water supplies are taken for purification. Prior to the construction of the experimental plant two series of observations bearing on this question had been made at selected groups of municipal water-filtration plants located in various parts of the Eastern and Middle Western States. The results of these observations [1] had indicated that a need existed for a further study of the problem under conditions subject to experimental control, such as are not obtainable at full-scale municipal plants, for obvious reasons. The experimental plant described in this article was designed chiefly with this purpose in view, though it also was intended for use in studying other problems having a bearing on the limitations in respect to bacterial efficiency existing in water-purification processes in general.

The construction of the experimental plant was authorized by the Surgeon General in December, 1922, as a result of the recommenda-

[1] For a description of these observations and a discussion of their results, see Reprint No. 737 from the Public Health Reports, Mar. 31, 1922, and Reprint No 987 from the Public Health Reports, Jan. 30, 1925.

tion of the consultants [2] in stream-pollution investigations. Following preliminary studies and the preparation of detailed plans and specifications, a contract was let in June, 1923, and the plant was constructed during the following autumn and winter [3] After a rather thorough series of preliminary tests, the plant was put into regular operation on August 1, 1924.

FEATURES OF DESIGN

The plant is of the rapid sand type, similar in its main features to most of the full-scale plants found along the Ohio River and on other inland streams of the United States It comprises the usual sedimentation basin, with means for coagulating the water chemically before delivery to the basin; two rapid sand filters of the gravity-flow type; clear-water storage facilities; and a continuous-feed chlorinator. Its output capacity at a normal rate of filtration (2 gallons per square foot of filter surface per minute) is 160,000 gallons per 24 hours, which would be sufficient in amount to supply a community of 1,600 people with 100 gallons per capita daily. The plant actually is larger than some small community installations in active service.

EXPERIMENTAL FEATURES

Although every effort was made to have the plant conform to current practice in its design, in order that the results obtained from its operation might be fairly representative of those to be expected from full-scale plants of similar type, it exhibits some features, designed especially for experimental purposes, which are unusual to municipal plants engaged in the active service of supplying water to domestic consumers These features may be briefly indicated as follows:

1. Provisions for delivering to the plant a continuous supply of Ohio River water, domestic sewage, or clear dilution water, or mixtures of these components in any desired proportions, thus giving a raw water varying over a wide range in its composition, both physically and bacterially.
2. Parallel division of the plant into two independently functioning halves, which permits the making of parallel observations, under exactly similar conditions, with two different methods of treatment, applied continuously.
3 An unusual flexibility in the arrangement and interconnection of the various units, whereby any particular unit may be operated in conjunction with any other unit, or may be by-passed entirely, if desired.

---

[2] The consultants are Dr Stephen A. Forbes, Dr. Edwin O Jordan, Mr. Langdon Pearse, and Prof. Earle B. Phelps.

[3] The construction contract work was performed by F B Leopold, of Pittsburgh, with the Ferro-Concrete Construction Co., of Cincinnati, as subcontractor for the concrete and masonry work.

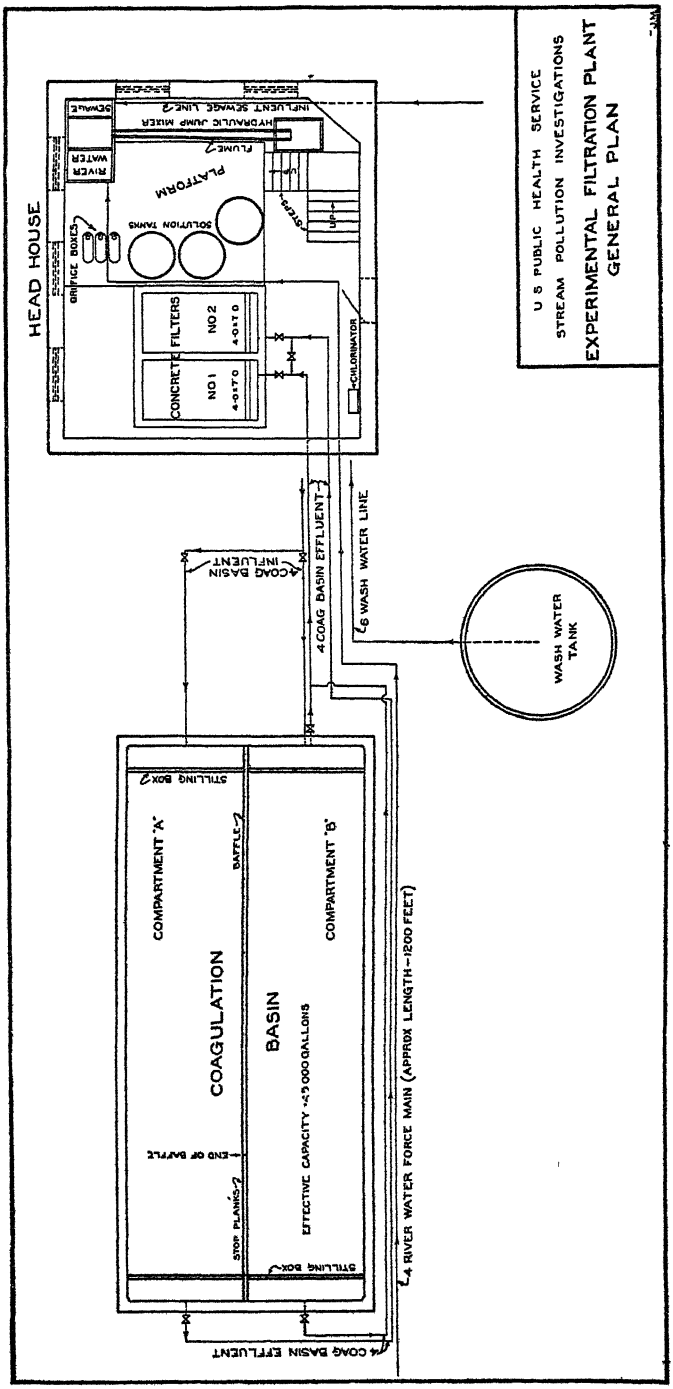
U S PUBLIC HEALTH SERVICE
STREAM POLLUTION INVESTIGATIONS
EXPERIMENTAL FILTRATION PLANT
GENERAL PLAN
HEAD HOUSE
INFLUENT SEWAGE LINE
HYDRAULIC JUMP MIXER
FLUME
SEWAGE
RIVER WATER
PLATFORM
SOLUTION TANKS
ORIFICE BOXES
STEPS
UP
CONCRETE FILTERS
NO 1
NO 2
CHLORINATOR
4 COAG BASIN INFLUENT
4 COAG BASIN EFFLUENT
6 WASH WATER LINE
WASH WATER TANK
STILLING BOX
COMPARTMENT 'A'
BAFFLE
COMPARTMENT 'B'
COAGULATION
BASIN
EFFECTIVE CAPACITY 45 000 GALLONS
END OF BAFFLE
STOP PLANKS
STILLING BOX
4 RIVER WATER FORCE MAIN (APPROX LENGTH–1200 FEET)
4 COAG BASIN EFFLUENT

FIG. 1

DESCRIPTION OF THE PLANT

In the text which follows the main features of each separate division of the plant will be described, particular attention being given to those features which are concerned more especially with its use for experimental purposes. Dimensions and capacities of the various units will be given wherever they bear on the design of the plant. In this connection reference is made to Figure 1, showing a general plan of the plant proper, and to Figure 2, containing a diagrammatic profile of the entire installation, including the river intake and raw-water force main, which are not shown in Figure 1

Intake—The intake, which is located in the Ohio River, differs considerably from that found in connection with the average large-scale installation, as the funds available for the work and the comparatively limited period over which it was expected to operate did not warrant extensive construction. A steel, screw-joint pipe, about 150 feet long, 30 feet of which is below the normal pool level [4] of the river, serves as the intake pipe. The lower end of this pipe is at an elevation corresponding to a river stage of 6 5 feet (Cincinnati Weather Bureau gauge), and the upper end of it is connected to the force main at an elevation corresponding to a river stage of about 60 feet. For use in priming the river water pump the lower end of the intake pipe is provided with a foot valve, and the connection to the force main is made with a check valve and by-pass connection. The intake pipe is provided with eight 4 by 3 inch tees located every 15 feet, each carrying an outstanding 3-inch hose valve and seven 4-inch gate valves inserted at mid-points between the hose valves. With this arrangement of valves, by connecting the pump suction with one of the hose valves, the discharge with the next higher hose valve, and closing the gate valve between these two connections, the intake pipe serves as a combined suction and discharge pipe for the river-water pump. The large number of hose connections and gate valves in the intake pipe are necessary because of the wide fluctuations in the stage of the Ohio River.

River-water pump—The river-water pumping unit comprises a two-stage centrifugal pump, with a 3-inch suction and a 2½-inch discharge, direct connected to a 15-horsepower induction motor, and has a capacity of 175 gallons per minute against a head of 150 feet. This unit is mounted on a small flat car equipped with two narrow-gauge trucks and is suitably housed for protection against the weather.

Parallel to and about 1 foot from the intake pipe is a narrow-gauge industrial track, supported on 6 by 6 inch stringers resting directly on small concrete piers spaced every 10 feet. The lower part of the

[4] Normal pool level corresponds to a river stage approximating 12 feet, as measured on the United States Weather Bureau gauge at Cincinnati.

track and intake pipe is laid on a grade of 18 5° and the upper part on a grade of 27.4°, the change in grade being made at an elevation corresponding to a river stage of about 28 feet The use of two grades was necessary in order that the track and intake pipe might conform to the slope of the river bank In order that the river-water pump may be level on both grades of the inclined track, the lower truck of the flat car may be adjusted in such a manner as to permit changing the angle of the platform with reference to the track. The car on which the pumping unit is mounted is shifted up and down the inclined track, depending upon the stage of the river, by means of a 3/8-inch flexible wire cable connected to the winding drum of a hand winch located at the top of the river bank.

Force main —Connecting the intake pipe with the plant is the river-water force main, consisting of a 4-inch screw-joint steel pipe about 1,200 feet long, laid at a minimum depth of 4 feet This part of the construction work was beset with difficulties, owing to the necessity of laying the pipe under two paved streets having a very heavy traffic and under the main tracks of the Pennsylvania Railroad (See fig 2.)

Sewage and dilution water —As previously noted, provision is made for continuous supplies of sewage, and likewise of filtered water for dilution purposes, thus making it possible, by mixing either one or both of these supplies with the river water, to obtain a raw water ranging from sewage to a highly diluted river water Domestic sewage from a residential section of the city is obtained from a near-by intercepting sewer by gravity flow through a 1½-inch pipe to the basement of the plant, where it is either pumped directly to the mixing device or allowed to flow into an equalizing tank, from which it is pumped to the mixing device. The sewage-equalizing tank has a capacity of 1,200 gallons, providing approximately 18 hours of detention for the raw sewage when drawn through the tank at a rate sufficient to provide an admixture of 1 per cent with the river water A single-stage centrifugal pump, with a 1½-inch suction and a 1-inch discharge, is used for pumping the raw sewage. This unit has a capacity of 25 gallons per minute against a working head of 40 feet A flushing connection is located so that either the sewage influent pipe from the intercepting sewer to the pump or the section extending through the pump and to the mixing device may be flushed separately. The dilution water is pumped directly from the filtered-water reservoirs to the mixing device

Mixing device —For mixing the various raw-water components, a device of the hydraulic-jump type is used. The hydraulic-jump mixing flume, invented by Mr. J. W. Ellms, was designed by him for this plant. The receiving tank is divided into three compartments, one of which receives river water, another sewage or dilution

water, or both together, and a central compartment into which the various components of the raw water are measured by means of 90° V-notched weirs Hook gauges are used to measure the flow of the river water, sewage, and dilution water. From the middle compartment the water flows to the inclined flume, which has a drop of 3 feet in a length of 10 feet, and in which the water attains a velocity of approximately 9 feet per second at the bottom. A submerged weir, set in the horizontal portion of the flume, builds up a standing wave, in which the components forming the river water become mixed. From the lower tank of the mixer the water flows by gravity to the coagulation basin.

Coagulation basin.—The coagulation basin is 37 feet long, 16 feet wide, and 11 feet 6 inches deep, inside dimensions. The basin proper is constructed of reinforced concrete, with a wooden longitudinal baffle extending through the middle of the tank and wooden stilling boxes at each end. The longitudinal baffle extends to within 9 feet 8 inches of the far end of the basin, leaving a clear space, 8 feet wide, between the end of the baffle and the stilling box for flow around the end of the baffle. Provision is made for closing this 8-foot space by means of stop planks, thereby dividing the basin into two separate compartments. The normal capacity of the basin is 45,000 gallons, providing a nominal detention period of slightly more than six hours. When the plant is operated at half its nominal capacity—that is, when only one filter unit is in service—the stop planks are put in position and one-half of the coagulation basin is used, or, if desired, the entire basin may be used with one filter unit, giving a nominal detention period of approximately 12 hours. Influent and effluent connections are arranged so that the two compartments into which the basin is divided may be operated either in series or in parallel. With these several combinations of tank and filter units, periods of sedimentation equal to 3, 6, or 12 hours, respectively, are available.

Filters—There are two rapid sand filter units of reinforced concrete construction, each one providing a net filtering area equal to 4 by 7 feet, or 28 square feet. The normal rate of filtration is 2 gallons per square foot per minute The filter sand is washed Ohio River sand, 27 inches deep, with effective size 0.42 millimeter and a uniformity coefficient of 1.50 Underlying the sand bed is a gravel layer 14 inches deep and graded in size from 1¼ inches at the bottom to less than ¼ inch at the top. A perforated pipe underdrain system is used, with 4½-inch diameter manifold and 1½-inch diameter laterals. The manifold is laid across the center of the filter, parallel to the smaller dimension, with eight laterals on each side, spaced at 6 inches on centers. The laterals are drilled with $\frac{9}{32}$-inch holes, staggered every 6 inches along the under side of the laterals in two

lines at 45° with the vertical. Semicircular wash-water gutters are placed to permit high-velocity washing up to an equivalent of 25 inches vertical rise per minute. A normal wash rate of 16 inches vertical rise per minute is used Simplex rate controllers, capable of being adjusted to carry rates of flow varying from 50 to 120 gallons per minute, are provided on each one of the filter effluent lines. Direct-reading glass-tube gauges are used for registering the loss of head, one tube being connected to a pipe through the filter wall just above the sand layer and the other to the filter-effluent line just ahead of the rate controllers.

Clear-water reservoirs—There are two separate clear wells, one under each filter Each clear well is 5 feet deep, providing a detention period of about 20 minutes at normal rates of operation. Connections between the filters and the clear wells permit the effluent from either one or both of the filters to be discharged into either clear well A separate overflow for each clear well connects with a single effluent pipe provided with an integrating water meter of the "detector" type for registering the total amount of water flowing from the filters The effluent line discharges into a "sump" overflowing into a near-by sewer

Chlorinator.—Chlorine is applied usually to the filtered water at its entrance to the clear wells by means of a small Wallace & Tiernan chlorinator of the manually controlled, solution feed type. Provision also is made for adding chlorine to the coagulated and settled water immediately prior to its filtration, and likewise for chlorination of the raw water just before its entrance into the sedimentation basin In the latter instance it is necessary to use an auxiliary injector in order to force the chlorine solution into the raw-water pipe against the added pressure of water at the basin level.

Wash-water storage.—For storing water for washing the filters, an elevated wooden tank is provided, 10 feet in diameter and 8 feet 6 inches deep, with a storage capacity equal to 4,800 gallons. Wash water is pumped to this tank from the filtered-water reservoirs by means of a single-stage centrifugal pump, having a 2-inch suction and a 1½-inch discharge, direct connected to a three-horsepower induction motor. This pumping unit has a capacity of 60 gallons per minute against a head of 45 feet. The wash-water pump also is used for pumping dilution water from the clear wells to the hydraulic-jump mixer.

Coagulant system.—The coagulant feed system comprises the ordinary type of solution feed apparatus, providing for the addition of alum, iron sulphate, and lime, either separately or in conjunction with each other. Three small wooden tanks, each 3 feet in diameter and 4 feet deep, of 200 gallons capacity, are used for preparing and storing the solutions of coagulating chemicals. The lime tank is

equipped with a mechanical agitator, consisting of a vertical rotating shaft carrying two paddle vanes inclined at an angle of 30° with the horizontal, and connected by a belt to a ⅛-horsepower electric motor.

Three cast-iron porcelain-lined orifice boxes are used for measuring the chemical solutions. The orifice boxes are provided with float-regulated inlet valves, adjusted to maintain a constant level of solution in the box for any given rate of flow Each box also is equipped with an adjustable slotted orifice, with tight-jointed sliding cover plate actuated by an adjusting spindle and graduated head All bends in the chemical piping are made of "tees" with their open ends screw plugged, and provision is made for a flushing-water connection on each one of the distributing lines. The chemicals are usually applied to the raw water just at the end of the flume in the lower tank of the hydraulic-jump mixer. Additional chemical distribution lines are provided, permitting the addition of coagulant solution to the water at the mid-point of its travel through the coagulation basin, and also as the water leaves the coagulation basin just prior to its application to the filters.

Piping—All piping throughout the plant is 4 inches in diameter, with the following exceptions: (*a*) Wash-water delivery main, wash-water drain, and clear-well overflows, which are 6 inches in diameter; (*b*) wash-water suction pipe, 2 inches; (*c*) chemical drain pipes, and sewage-equalizing tank influent, effluent, and drain pipes, 1½ inches; (*d*) chemical distribution piping, 1 inch; and (*e*) flushing-water lines, ¾ inch.

Operation schedule.—The plant is operated usually during 24 hours each day and 6 days every week. Three attendants are employed, working in three shifts of eight hours each. Complete operation records are kept, gauges and meters being read hourly A monthly summary of daily operations and laboratory results is prepared, giving, in addition to the data taken directly from the operating and laboratory records, certain special information bearing on the interpretation of the data secured from the various experiments. Any unusual or abnormal occurrences are fully recorded in a diary, in which also is maintained a detailed description of the experiments.

Sample collections.—The routine collection of water samples is carried out on a more extensive scale than is customary at a majority of full-scale plants, the total number of samples examined daily ranging from 20 to 36. In each routine collection, of which from 4 to 6 are made daily, samples are taken of the river water, of sewage, if it is being used, of the raw water, of the applied water, of the filtered water, and of the chlorinated water. The samples of filtered and chlorinated water are taken from sample cocks located in the

respective effluent lines, and the other samples are taken by dipping the sample bottle into the water to be sampled.

Laboratory control—The laboratory examinations are mainly bacteriological, but routine tests are made of turbidity, alkalinity, and the pH of the various samples. Bacteriological examinations include the 37° C agar count, and the usual quantitative tests for the presence of members of the *B. coli* group For the determination of the *B. coli* index in the filtered and disinfected water, 5 standard portions of 10 cubic centimeters each are inoculated from each sample, in accordance with the procedure recommended in testing conformant to the Treasury Department standard Additional single portions of 1 cubic centimeter and 0 1 cubic centimeter of samples from these two sources are likewise tested for *B coli*

At the present writing the experimental plant has been operated on a regular schedule for 20 months, of which time 15 months have been devoted primarily to a study of the efficiencies of bacterial removal obtainable under varying conditions with respect to raw-water pollution At the present time increased attention is being given, and in the immediate future will be given, to problems of a special nature closely allied with the main objectives of these studies.

In planning and carrying out the experimental studies, the constant advice and assistance of Mr. Joseph W. Ellms, of Cleveland, Ohio, who has served as a special consultant for this work, have been most generously given to the personnel having these studies in hand. Mr. Ellms's aid, based on his long experience, both in the practical management of water-purification plants and in extensive research work concerned with their operation, has been a valuable asset in this connection.

II. PRELIMINARY REVIEW OF RESULTS OF PRIMARY EXPERIMENTS

By H W STREETER, Sanitary Engineer, United States Public Health Service

In the preceding article of this series a description has been given of an experimental water-purification plant which has been constructed and is now being operated by the United States Public Health Service on the grounds of the laboratory of stream pollution investigations at Cincinnati, Ohio. In the present article it is proposed to give a preliminary review of the experimental work thus far undertaken at this plant and to discuss briefly some of the more outstanding results of that part of the experiments which has been concerned more especially with the primary objective of these studies.

The primary objective in question, as stated by Mr. Moss, was "that of providing a means whereby a detailed study could be made of the limits of raw-water pollution which are consistent with the production of effluents conforming to accepted standards of bacterial quality, having reference to water-purification plants of the type

found along the Ohio River and on other similar river systems of the country serving as sources of purified municipal water supplies." It also has been noted in the paper by Mr. Moss that, prior to the construction of the experimental plant, two series of observations bearing on this question had been made at selected groups of municipal water-purification plants located in various parts of the Eastern and Middle Western States. The results of these observations having indicated a need for a further study of the problem under conditions subject to experimental control, the experimental plant was constructed chiefly with this end in view, though it also was intended for a secondary purpose, which may be described briefly as follows:

The secondary objective in question, for which the experimental plant is well adapted, has been an evaluation of the different factors, subject to the control of the plant operator, which influence, directly or indirectly, the cost and bacterial efficiency of water purification. The purpose of these observations is to provide a basis for judgment as to the possibilities which may exist for securing, at a reasonable cost, an increased efficiency of bacterial removal by plants in current service without entailing any radical changes in their design or construction. On this question hinges that of whether it may be necessary ultimately to revise any permissible limits of raw-water pollution which may be established from observations made under present conditions of plant operation, on which the portion of this study concerned with the primary objective above stated has been based. These secondary experiments having been in progress but a short time at the present writing, no discussion of their results is justified in this paper, which, as previously noted, is concerned wholly with the experiments having reference to the primary objective of the studies.

In conducting these primary experiments it was desired to reproduce, as nearly as practicable, conditions of operation of the plant such as are found at the average full-scale municipal plant in routine service. With this end in view, the experimental plant has been operated throughout the entire 24 hours of each working day, as noted in the paper by Mr. Moss, and care has been taken to follow normal operating practice closely in every detail, likewise, to produce an effluent comparable, both physically and chemically, with effluents as ordinarily delivered by municipal plants along the Ohio River and other rivers of similar type.

In view of the fact that it is necessary to discontinue operation of the plant every Sunday, it has been convenient to regard the six working days of each week as the unit of time for the experiments, which have been divided, accordingly, into a series of weekly "runs," each one of which has constituted virtually an individual experiment.

The procedure followed in making the individual experiments, though governed to some extent by circumstances, has been aimed, in general, to facilitate, as far as practicable, a direct observation of the relations existing between the bacterial quality of the raw water and the resulting quality of the effluents produced at successive stages of treatment. This relationship, it will be noted, provides the basis for determining the limiting densities of raw-water bacteria which are consistent with producing effluents of specified bacterial quality.

Theoretically, an ideal procedure would consist in starting a given experiment with a raw water polluted bacterially to a relatively slight degree, such that the quality of the effluent produced from it were better by a considerable margin than the limit fixed by the assumed standard. From this initial condition the bacterial content of the raw water would be increased gradually until the quality of the effluent became deteriorated decidedly below the standard, noting the corresponding changes occurring progressively in the quality of raw water and effluent throughout the period of the observations If a definite relationship existed between the density of bacteria in the raw water and in the effluent, the raw-water condition at which overburden occurred would be indicated by the abscissa of a point on the relationship curve the ordinate of which exactly equaled the limiting bacterial content of the effluent as fixed by the particular standard assumed.

In following the procedure described it originally was intended to increase the bacterial content of the raw water at intervals of every few hours, holding it constant during these periods and noting the effect produced on the quality of the effluent in consequence of each successive raw-water change, making due allowance for the time of passage of water through the plant. This procedure, however, was found to be subject to numerous difficulties, owing chiefly to sudden and unexpected changes occurring in the bacterial content of the river water during the periods in which it was desired to hold it constant [1] The method finally adopted in a majority of the experiments was similar to the one above described, except that the character of the raw water was adjusted at intervals usually of one or two days and the results of the observations averaged by days, rather than considered individually. In this manner it has been possible to minimize unbalanced errors in the observations due to uncontrollable variations in the character of the raw water occurring during a given day.

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[1] The only reasonable explanation assignable as to the cause of these sharp changes is afforded by the fact that considerable volumes of sewage are discharged into the river at several points located along the Cincinnati shore and not far upstream from the intake. The sewage from these sources is known to undergo hourly changes, sometimes erratic in character, both in its flow and in its composition It is entirely probable that these variations are frequently communicated directly to the river water at the intake

In order to cover a sufficiently wide range of raw-water bacterial content, it has been necessary to repeat the individual experiments several times under each condition of season and raw-water turbidity encountered during the period of the observations, the experiments made under each condition having been planned, as far as practicable, to cover a series of different but slightly overlapping ranges of bacterial densities It was expected originally that the required range of variation in this respect could be secured by adding sewage to the river water whenever necessary to augment the normal fluctuations in the composition of the latter. Owing, however, to the high degree of pollution of the river water at the plant intake by sewage discharged into the river at points immediately upstream, it was found necessary frequently to dilute the river water with filtered water from the municipal supply in order to reduce its bacterial density sufficiently to bring it within the desired range.

RESULTS OF PRIMARY EXPERIMENTS

The results of the primary experiments may be considered advantageously from the following standpoints. (*a*) The crude relationships indicated as existing between the bacterial quality of the raw water and the corresponding quality of the effluents produced at successive stages of treatment; (*b*) the manner and extent to which this relationship is shown to be affected by variations in certain factors, notably by variations in raw-water turbidity and in temperature and other seasonal conditions; (*c*) the extent to which the efficiency of bacterial purification shown by the experimental plant has been found to agree with the corresponding efficiency of full-scale municipal plants of the same type under similar conditions of raw-water pollution; and (*d*) the indicated limits of bacterial pollution of the raw water consistent with the production of effluents conforming to given standards of bacterial quality Each one of these four points will be discussed separately and in the order above given.

RELATIONS BETWEEN BACTERIAL QUALITY OF RAW WATER AND CORRESPONDING QUALITY OF EFFLUENTS

For the purpose of combining the results of the observations in such a manner as to show the average relations existing between the degree of bacterial pollution of the raw water and the corresponding bacterial quality of the effluents produced at various stages of treatment, the statistical method found to be most suitable was the same one which previously had been followed in analyzing a more extensive series of data obtained from the two collective studies of municipal plants to which reference has been made. This method, which has been described in a previous article,[2] has consisted in grouping the

[2] Reprint No. 737 from the Public Health Reports, Mar 31, 1922, p 4.

data according to the numbers of bacteria observed in the raw water and averaging, for each group, the numbers observed coincidently in the raw water and in the effluent from each successive stage of treatment The results obtained from thus grouping and averaging the daily means, expressed both in terms of the bacteria growing at 37° C and of members of the *B coli* group in terms of the usual *B coli* index, are given in Table 1, in which are also given the corresponding residual percentages of plate growers and of *B. coli*, referred both to the raw water and to the influent water of each stage.

TABLE 1 —*Relations between numbers of bacteria observed in the raw water and corresponding numbers observed at successive stages of treatment, as obtained by grouping the results according to numbers of raw-water bacteria falling within specified ranges*

[Derived from daily averages October, 1924, to December, 1925, inclusive]

Raw-water count range	Number of items	Average turbidity (raw)	Average numbers				Residual per cent of raw			Residual per cent of influent	
			Raw	Applied	Filtered	Chlorinated	Applied	Filtered	Chlorinated	Filtered	Chlorinated
24 HOUR BACTERIAL COUNT PER CUBIC CENTIMETER											
0-1,000	21	20	625	381	16 0	(1)	60 9	2 6	-------	4 2	-------
1,001-2,000	61	61	1,500	559	36 0	0 73	37 4	2 4	0 049	6 0	2 0
2,001-3,000	48	84	2,510	636	24 0	2 2	25 4	96	088	3 8	9 2
3,001-5,000	55	74	3,830	1,050	50 0	2 2	27 4	1 3	057	4 8	4 4
5,001-10,000	42	82	7,360	1,650	114 0	3 9	22 4	1 5	.053	6 9	3 4
10,001-25,000	53	141	15,300	2,350	176 0	6 5	15 4	1 2	.042	7 5	3 7
Over 25,000	39	191	61,300	3,970	219 0	21 0	6 5	26	034	5 5	9 6
B COLI INDEX PER 100 CUBIC CENTIMETERS											
0-5,000	67	77	2,450	1,050	10 9	0.48	42 9	0 44	0 020	1 0	4 4
5,001-10,000	102	78	7,690	3,020	29.9	1 1	39.3	.39	014	99	3 7
10,001-50,000	76	93	33,100	7,980	137.0	3.1	24 1	.41	.009	1 7	2.3
50,001-100,000	89	105	68,800	14,400	151.0	11 4	20 9	.22	.017	1 0	7.5
Over 100,000	36	175	898,000	90,800	455.0	54 3	10 1	05	.006	.5	11 9

[1] No results available

A mere inspection of Table 1 is sufficient to indicate the existence of a decided correlation between the density of bacteria of both classes, as observed in the raw water and the corresponding densities in the effluent from each successive stage of treatment. In Figure 1, in which the *B. coli* data given in Table 1 have been plotted on logarithmic scales (the raw-water counts being plotted as abscissæ and the corresponding effluent counts as ordinates), the relationship is shown to approach very closely the form of a power function, which may be represented by the simple equation: $E=cR^n$, in which R denotes the bacterial content of the raw water, E the corresponding content of the effluent, and c and n empirical constants, the value of which has been found to vary with the type of purifi-

cation process, the class or kind of bacteria, and the number of intermediate stages of treatment between the source of raw (or influent) water and the particular effluent considered. Though not here given, a similar plot of the 37° C. plate count figures in Table 1 can readily be shown to follow the same trend as that of the *B. coli* data.

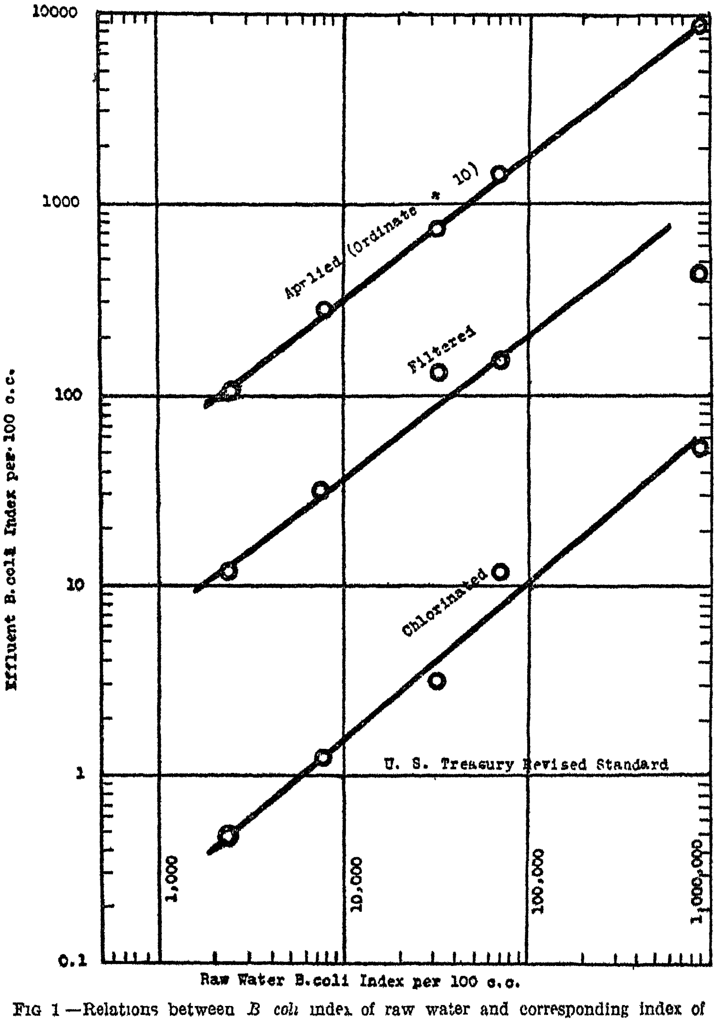

FIG 1.—Relations between *B coli* index of raw water and corresponding index of effluents from successive stage of treatment (Plot of data given in Table 1)

The values of *c* and *n*, as derived from plots of the data such as are given in Table 1, may be tabulated as follows:

	24-hour count, 37° C.		*B. coli* index	
	c	*n*	*c*	*n*
Applied water	11.0	0 55	0.34	0.75
Filtered water	.32	.61	.029	.77
Chlorinated water	.0011	.91	.0008	.82

From a study of these data the following indications of interest may be noted:

1. That the correlation observed between the *B. coli* index of the raw water and that of the various effluents is slightly smoother than the corresponding correlation as observed between the numbers of bacteria growing on agar plates at 37° C.

2. That the values of *c*, as derived from the *B coli* relationships, are of a lower order of magnitude than those derived from the corresponding plate-count data.

3 That the values of *n* derived from the two series of plots are of a similar order of magnitude, but differ in that they are more uniform in their values as derived from the *B coli* data.

4 That the residual percentages of plate growers and of *B coli*, as referred to the raw water, show a tendency toward a progressive diminution with increasing raw-water content, but that this trend is due largely to the effect of coagulation and sedimentation, as is evidenced by the fact that the residual percentages in the unchlorinated and chlorinated filter effluents when referred, in each instance, to the influent water of the immediately preceding stage, do not show a similar trend.

In addition, it may be noted that a rather decided tendency is shown toward decreasing efficiency of *B. coli* removal by chlorination coincidently with increasing densities of *B coli*, both in the raw water and in the unchlorinated filter effluent. Whether or not this tendency is due to the presence of larger amounts of organic matter in the filter effluent coinciding with higher numbers of bacteria is a question requiring further study. The efficiency of filtration with respect to the removal of both classes of bacteria enumerated is shown to remain practically constant, irrespective of the numbers present either in the raw water or the filter influent water.

INFLUENCE OF CHANGES IN SEASON AND VARIATIONS IN RAW-WATER TURBIDITY ON FOREGOING RELATIONSHIPS

The influence exerted by seasonal changes and variations in raw-water turbidity on the foregoing relationships may best be gauged by analyzing the results of the observations covering 12 consecutive months, comprising a complete seasonal cycle. For the 12 months extending from October 1, 1924, to September 30, 1925, inclusive, covering the first full year of routine operation of the plant, the effect of changes in season on these relationships may be considered according to three periods: (*a*) December to March, inclusive, representing winter conditions; (*b*) June to September, inclusive, representing summer conditions; and (*c*) the remaining four months of the year, representing intermediate seasonal conditions. These periods have been selected arbitrarily, chiefly for convenience in separating the

data, and it is realized that they afford only a rough basis for a seasonal classification of the material at hand.

In analyzing the data from the standpoint named the conclusions to be derived from such an analysis may be clarified by noting that a simple index of the effect of a given factor, such as change in season, on the relations existing between the bacterial content of the raw water and that of a particular effluent is afforded by comparing the residual percentages of bacteria observed in the effluent for each separate condition assumed (in this case the three seasonal periods), when the average turbidity and bacterial content of the raw water are of about the same magnitude in each instance. Thus, if the residual percentages of bacteria observed during the three seasonal periods named were approximately the same, when the average turbidity and the bacterial content of the raw water were of similar magnitude in each one of the three periods, it would be concluded that the relation existing between the bacterial content of the raw water and that of the effluent were relatively unaffected by seasonal changes. This is true for the reason that any change in the relationship between the two given variables, if one of them remain constant, is necessarily reflected by a corresponding change in the ratio existing between them

For the purpose at hand the proper method of classifying the data statistically would consist in making, for each seasonal period, a primary separation of the material according to raw-water turbidity, and, secondarily, a classification of the material in each turbidity group according to raw-water bacterial content, the method of separation in each instance being similar to that which has been described in explaining the derivation of Table 1. This procedure would thus provide a basis for comparing the residual percentages of bacteria observed in the three seasonal periods under approximately the same conditions with respect to raw-water turbidity and bacterial content.

In the present instance, however, no effort will be made to show the results obtained except as derived from a simple classification of the material, first, according to season, and, second, according to raw-water bacterial content, which classification appears to have brought out the essential points fully as well, for all practical purposes, as the more elaborate one above described. The results obtained from the first step of the classification are given in Table 2 and, from the second step, in Table 3. From these two tables the following broad conclusions may be drawn:

1. That the over-all efficiency of bacterial removal, including chlorination, as regards both the plate growers and the *B. coli*, appears to be relatively little affected by seasonal changes, this being especially true of the *B. coli*.

TABLE 2.—*Comparative average numbers of bacteria and corresponding numbers and residual percentages of bacteria observed, respectively, in the raw water and in the effluents from successive stages of treatment during three different seasonal periods of four months each, during the year October, 1924, to September, 1925, inclusive*

BACTERIAL COUNT 24 HOURS, 37° C

	Winter (December-March)	Mid-season (other months)	Summer (June-September)
Bacterial count per cubic centimeter (24 hours, 37° C)			
Raw	22,800 0	8,730 0	14,200 0
Applied	1,150 0	1,630 0	2,470 0
Filtered	30 0	65 0	235 0
Chlorinated	7 6	6 0	5 6
Per cent of raw-water count			
Applied	5 0	18.7	17 4
Filtered	13	75	1 7
Chlorinated	033	069	039
Per cent of influent water count			
Applied	5 0	18 7	17 4
Filtered	2 6	4.0	9 5
Chlorinated	25 3	9 2	2.4

B COLI INDEX PER 100 CUBIC CENTIMETERS

	Winter (December-March)	Mid-season (other months)	Summer (June-September)
B coli index per 100 cubic centimeters			
Raw	331,000 0	47,900 0	65,900 0
Applied	31,400 0	15,100 0	7,890 0
Filtered	216 0	38 0	177 0
Chlorinated	24 9	3 5	4.0
Per cent of raw-water index			
Applied	9 5	31 5	12 0
Filtered	65	79	27
Chlorinated	008	007	006
Per cent of influent water index			
Applied	9 5	31 5	12 0
Filtered	69	25	2.2
Chlorinated	11 5	9 2	2 3

2 That the bacterial efficiency of separate stages of treatment is influenced to a measurable extent by seasonal changes, that of filtration apparently being higher in winter than in summer and that of chlorination vice versa The *B coli*, however, appear to be less affected in this respect than do the bacteria growing on plates at 37° C.

The second point to be considered in this connection is the effect, if any, exerted on the efficiency of bacterial removal by variations in raw-water turbidity. The method of analyzing and presenting the data from this standpoint has been the same as that followed in studying the effect of seasonal changes, except that the primary classification of the material, instead of being made according to three seasonal periods, has been made according to raw-water turbidities falling within the three arbitrary groups 0 to 10, 11 to 100, and over 100, representing, respectively, a relatively clear, a moderately turbid, and a decidedly turbid raw water. In this, as in the preceding instance, a simple classification of the material, first, according to raw-water turbidity, and, second, according to raw-water

bacterial content, appears to have brought out all of the essential points concerning the influence on bacterial efficiency exerted by variations in raw-water turbidity.

TABLE 3.—*Comparative average numbers of bacteria and corresponding numbers and residual percentages of bacteria observed, respectively, in the raw water and in the effluents from successive stages of treatment during the same three seasonal periods as indicated in Table 2 and coinciding with raw-water numbers falling within specified ranges*

[W=Winter months M=Mid-season S=Summer season]

BACTERIAL COUNT, 24 HOURS, 37° C

Raw-water count range	Seasonal periods	Average bacterial count per cubic centimeter				Per cent of raw water			Per cent of influent		
		Raw	Applied	Filtered	Chlorinated	Applied	Filtered	Chlorinated	Applied	Filtered	Chlorinated
	W	1,610	246	3 0	0 92	15.3	0 19	0 057	15 3	1 2	30 0
0-2,000	M	1,530	640	25 0	42	41 8	1 6	027	41 8	3 9	1 7
	S	1,560	918	139 0	1 0	59 0	8 9	064	59 0	15 1	72
	W	2,570	356	6 6	3 4	13 9	.26	13	13 9	1 9	51.5
2,001-3,000	M	2,500	766	28 0	1 3	30 6	1 1	052	30 6	3 7	4 6
	S	2,530	778	97 0	83	30 8	3 8	033	30 8	12.5	86
	W	3,650	308	11 0	3 0	8 4	38	082	8 4	4 5	21 4
3,001-5,000	M	3,890	1,290	45 0	1 9	33 2	1 2	049	33 2	3 5	4.2
	S	4,240	1,200	125 0	1 1	29 7	2.9	026	29 7	9 9	88
	W	8,260	1,530	54 0	5 4	18 5	65	065	18 5	3 5	10 0
5,001-10,000	M	7,410	1,940	76 0	7 8	26 2	1 0	105	26 2	3 9	10 3
	S	7,310	1,620	157 0	2 0	22 2	2 1	027	22 2	9 7	1 3
	W	18,800	1,360	28 0	3 8	7 2	15	020	7 2	2 1	13 6
10,001-25,000	M	12,300	3,650	259 0	24 0	29 6	2 1	195	29 6	7 1	9 3
	S	14,400	2,560	228.0	3 6	17 8	1 6	025	17 8	8 9	1 6
	W	68,000	2,660	74 0	20 0	3 9	.11	029	3 9	2 8	27 1
Over 25,000	M	92,600	7,310	202 0	18 0	7 9	22	019	7 9	2 8	8 9
	S	36,100	4,990	491 0	19 0	13 8	1 4	053	13 8	9 8	3 9

B COLI INDEX

Raw-water count range	Seasonal periods	Average B coli index per 100 cubic centimeters				Per cent of raw water			Per cent of influent		
		Raw	Applied	Filtered	Chlorinated	Applied	Filtered	Chlorinated	Applied	Filtered	Chlorinated
	W	3,140	914	4 7	0 44	29 1	0 15	0 014	29 1	0 51	9 4
0-5,000	M	3,490	1,360	6 1	.46	39 0	17	013	39.0	.45	7 5
	S	2,170	[1] 2,800	73 6	63	100+	3.4	.029	100+	2.6	86
	W	7,770	2,180	10 2	.95	28 1	13	012	28 1	47	9 3
5,001-10,000	M	7,860	3,330	26 8	.78	42.4	34	001	42.4	.80	2 9
	S	8,490	4,960	127 0	2.7	58 4	1 5	.032	58 4	2 6	2.1
	W	33,100	3,920	209 0	4.8	11.8	63	.014	11 8	5.3	2.3
10,001-50,000	M	32,500	10,200	41 9	1.8	31 4	.13	006	31.4	41	4 3
	S	34,000	8,600	105 0	3 1	25 3	.57	009	25 3	2 3	1.6
	W	73,000	27,500	147 0	26 0	37.7	20	036	37 7	53	17 7
50,001-100,000	M	72,100	13,900	24 3	1 3	19 3	034	002	19.3	.17	5.3
	S	65,300	8,400	193 0	5 4	12 9	30	008	12 9	2 30	2 8
	W	1,130,000	92,600	563.0	71 0	8.2	050	.006	8 2	61	12.6
Over 100,000	M	1,000,000	316,000	390 0	52 0	31 6	039	005	31.6	.12	13.3
	S	283,000	11,000	200 0	7 6	3.9	.071	.003	3.9	1 8	3.8

[1] Based on one observation

The results obtained from an analysis of the data from this standpoint are given in Tables 4 and 5. From these tables the following general conclusions may be drawn:

TABLE 4.—*Comparative average numbers of bacteria and corresponding numbers and residual percentages of bacteria observed, respectively, in the raw water and in the effluents from successive stages of treatment during periods of the year, October, 1924, to September, 1925, inclusive, in which the raw-water turbidity fell within the three respective ranges, 0 to 10, 11 to 100, and over 100*

BACTERIAL COUNT, 24 HOURS, 37° C

	Raw-water turbidity, P P M		
	0–10	11–100	Over 100
Bacterial count per cubic centimeter (24 hours, 37° C)			
Raw	5, 960 0	11, 400 0	23, 700 0
Applied	2, 020 0	1, 700 0	1, 590 0
Filtered	93 0	107 0	101 0
Chlorinated	15 0	3 2	8 9
Per cent of raw-water count			
Applied	33 9	14. 9	6 7
Filtered	1 6	94	43
Chlorinated	25	028	038
Per cent of influent water count			
Applied	33 9	14 9	6 7
Filtered	4 6	6 3	6 4
Chlorinated	16 1	3 0	8 8

B COLI INDEX

	0–10	11–100	Over 100
B coli index per 100 cubic centimeters			
Raw	35, 300 0	84, 500 0	275, 000 0
Applied	7, 100 0	12, 800 0	30, 600 0
Filtered	37 0	84 0	227 0
Chlorinated	1 8	3 6	24 0
Per cent of raw-water index			
Applied	20 1	15 1	11 1
Filtered	10	099	082
Chlorinated	0051	0043	0087
Per cent of influent water index			
Applied	20 1	15 1	11 1
Filtered	52	66	74
Chlorinated	4 9	4 3	10 6

TABLE 5—*Comparative average numbers of bacteria and corresponding numbers and residual percentages of bacteria observed, respectively, in the raw water and in the effluents from successive stages of treatment during periods in which the raw-water turbidity fell within the three ranges indicated in Table 4 and coinciding with raw-water bacterial numbers falling within the different ranges specified*

BACTERIAL COUNT, 24 HOURS, 37° C

Raw-water count range	Turbidity, P P M	Average bacterial count per cubic centimeter				Per cent of raw water			Per cent of influent water		
		Raw	Applied	Filtered	Chlorinated	Applied	Filtered	Chlorinated	Applied	Filtered	Chlorinated
	0–10	1, 630	1, 150	69 0	([1])	70 5	4 2	-------	70 5	6 0	-------
0–2,000	11–100	1, 490	328	12 0	0 8	22 0	81	0 054	22 0	3 7	6 7
	Over 100	1, 630	276	3 6	6	16 9	22	037	16 9	1 3	16 7
	0–10	2, 270	1, 240	34. 0	1 7	54 6	1. 5	075	54. 6	2 7	5 0
2,001–3,000	11–100	2, 570	663	52 0	1 1	25 8	2. 0	043	25 8	7 8	2 1
	Over 100	2, 560	358	9 7	3 4	14 0	38	13	14 0	2 7	35 1
	0–10	4, 050	1, 390	48 0	4 5	34 3	1. 2	11	34 3	3 5	9 4
3,0001–5,000	11–100	3, 810	1, 210	67 0	2 3	31 8	1. 8	06	31 8	5 5	3 4
	Over 100	3, 820	464	18 0	1 0	12 2	47	026	12 2	3 9	5 5
	0–10	7, 810	2, 050	84. 0	7 7	26 3	1 1	099	26. 3	4 1	9 2
5,001–10,000	11–100	7, 010	1, 770	148 0	2. 0	25 2	2 1	029	25 2	8 4	1 4
	Over 100	7, 680	1, 070	106 0	4 7	13 9	1 4	061	13 9	9 9	4. 4
	0–10	13, 100	5, 260	180 0	24 0	40 2	1 4	18	40 2	3 4	13 3
10,001–25,000	11–100	14, 000	2, 760	212 0	3 8	19. 7	1. 5	027	19 7	7 7	1 8
	Over 100	[2] 17,600	1, 539	126 0	8 6	8 8	71	049	8 8	8. 2	6 8
	0–10	31,000	8, 180	624 0	67. 0	26 4	2 0	. 22	26 4	7 6	10 7
Over 25,000	11–100	[2] 55,200	3, 760	132. 0	11 0	6 8	. 24	020	6 8	3 5	8 3
	Over 100	[2] 66,700	3, 740	228 0	22. 0	5 6	. 34	033	5 6	6 1	9. 6

[1] Dilution water period [2] Large proportion of observations made when sewage was being added.

TABLE 5.—*Comparative average numbers of bacteria and corresponding numbers and residual percentage of bacteria observed, respectively, in the raw water and in the effluents from successive stages of treatment during periods in which the raw-water turbidity fell within the three ranges indicated in Table 4 and coinciding with raw-water bacterial numbers falling within the different ranges specified*—Con.

B COLI INDEX

Raw-water count range	Turbidity P P M	Average B coli index per 100 cubic centimeters				Per cent of raw water			Per cent of influent water		
		Raw	Applied	Filtered	Chlorinated	Applied	Filtered	Chlorinated	Applied	Filtered	Chlorinated
0–5,000	0–10	2,500	4,000	8	-------	100+	0 32	-------	100+	0 2	------
	11–100	3,120	1,550	25	0 7	49 7	80	0 022	49 7	1 6	2 8
	Over 100	3,410	828	6 3	4	24 3	18	012	21 3	76	6 3
5,001–10,000	0–10	8,300	3,870	47	7	46 6	57	008	16 6	1 2	1 5
	11–100	7,660	3,610	19	1 2	47 1	25	.016	47 1	53	6 3
	Over 100	7,840	2,080	47	1 2	26 5	60	015	26 5	2 3	2 6
10,001–50,000	0–10	35,500	10,500	18	3 4	29 6	051	010	29 6	17	18 9
	11–100	33,200	9,210	91	1 3	27 7	27	004	27 7	99	1 4
	Over 100	32,[illegible]00	3,530	217	8 6	10 9	67	.027	10 9	6 1	4.0
50,001–100,000	0–10	69,700	13,300	29	1 1	19 1	042	002	19 1	22	3.8
	11–100	65,200	12,600	121	4 9	18 4	19	008	18 4	1 01	4 0
	Over 100	73,400	18,100	268	27 0	24 7	37	037	24 7	1 5	10 1
Over 100,000	0–10	505,000	10,000	100	5 0	2 0	02	001	2 0	1 0	5 0
	11–100	733,000	71,500	270	22 0	9 9	04	003	9 9	.38	8 1
	Over 100	985,000	102,000	546	71 0	10 4	06	.007	10 4	.54	13 0

1. That the over-all efficiency of removal of bacteria growing on agar plates at 37° C. is influenced decidedly by variations in raw-water turbidity, chiefly, however, because of the effect of this factor on the bacterial efficiency of preliminary coagulation-sedimentation.

2 That the over-all efficiency of *B. coli* removal is influenced in no orderly manner and to a very slight, if any, extent by variations in raw-water turbidity.

3. That the only separate stage of treatment the bacterial efficiency of which appears to be affected in any consistent manner by variations in raw-water turbidity, is that of preliminary coagulation-sedimentation, which becomes higher with increased turbidity. This statement does not apply, however, to the efficiency of *B coli* removal, which does not appear to be influenced in any consistent direction or to any material extent at any stage of treatment by variations in raw-water turbidity.

Perhaps the most significant general conclusion to be derived from the foregoing data is that the efficiency of *B. coli* removal, whether considered in reference to the purification process as a whole or to any given stage of it, has not been evidenced as being influenced consistently or measurably either by changes in season or by variations in raw-water turbidity. This finding, which confirms that of the previous collective study of a group of full-scale municipal plants, is of basic importance, owing to the sanitary significance of the *B. coli* group of bacteria and to the indication which it gives that the

relations existing between the *B. coli* content of the raw water and that of the effluents from various stages of treatment is virtually unaffected by either of the two factors considered. In view of this indication, the *B coli* relationship shown in Table 1 and illustrated in Figure 1 may be regarded as being of basic significance, in so far as the results of this study are concerned

COMPARABILITY OF EXPERIMENTAL RESULTS WITH THOSE OF FULL-SCALE PLANTS OF SIMILAR TYPE

The extent to which the efficiency of bacterial purification shown by the experimental plant has been found to agree with the corresponding efficiency of full-scale municipal plants of the same type under similar conditions of raw-water pollution is a question of basic importance in the current studies, as the applicability of conclusions derived from the experimental studies to conditions of full-scale operation depends, to a large extent, on the degree of accordance existing between the performance of the experimental plant from this standpoint, as compared with that of full-scale plants under the same conditions.

In order to make a proper comparison in this respect, it has been desirable, for obvious reasons, to select for the purpose, laboratory data only from full-scale plants at which the conditions as regards the type and elaboration of treatment, the character and density of pollution of the raw water treated, and the physical operation of the plant closely parallel those existing at the experimental plant It is desirable, moreover, to consider in this connection only plants supplying laboratory data fairly comparable with those obtained from the experimental plant.

For the purpose at hand the most suitable data for comparison with those of the experimental plants are the results obtained from observations made at 10 municipal filtration plants located on the Ohio River, in connection with the collective survey to which reference has been made. Five of these ten plants have single-stage coagulation and sedimentation, which was the kind of preliminary treatment used in the experiments discussed in this paper. In Table 6 are given, in parallel columns, the averages of the yearly mean 37° C. bacterial counts and *B. coli* indices observed in the raw waters and effluents of these five plants, together with corresponding averages of the experimental results obtained during periods in which the bacterial content of the raw water fell within the range of magnitude coinciding most nearly with the average range of the five raw waters in question.[3] In the right-hand section of the table are given the

[3] The range in question included all *B coli* results observed in the raw water and the corresponding results observed in the various effluents for days on which the mean raw-water *B coli* index was equal to or less than 10,000 per 100 cubic centimeters.

corresponding residual percentages of plate-growing bacteria and of *B. coli*, referred both to the raw water and to the influent water of each separate stage.

TABLE 6.—*Averages of numbers of bacteria and of B. coli in raw waters and effluents of five Ohio River filtration plants having single-stage coagulation and sedimentation, as compared with corresponding averages of numbers observed at experimental plant in most nearly coincident ranges of raw-water numbers*

	Average content		Residual per cent of raw-water content	
	Ohio River plants	Experimental plant	Ohio River plants	Experimental plant
24-hour count, 37° C. (per cubic centimeter)				
Raw	3,460.0	3,880.0	----------	----------
Applied	601.0	1,050.0	17.4	27.1
Filtered	27.0	48.0	.8	1.2
Chlorinated	4.4	2.2	.12	.06
B. coli index (per 100 cubic centimeters)				
Raw	4,570.0	3,180.0	----------	----------
Applied	1,030.0	1,270.0	22.5	39.9
Filtered [1]	3.5	3.9	.08	.12
Chlorinated [1]	.6	.5	.013	.016

[1] Based, in both instances, on results obtained from tests of five 10 cubic centimeter portions of all samples.

In order to make a proper comparison of the two series of *B. coli* data, it has been necessary to reduce the experimental results obtained from tests of the unchlorinated and chlorinated effluents to a basis of those derived from tests only of five 10 cubic centimeter portions of each sample, owing to the fact that this method was followed at the five Ohio River plants during the year covered by the averages. This procedure involved recalculating, in the experimental series, the *B. coli* index for each individual sample, after eliminating all results of tests of 1 cubic centimeter and 0.1 cubic centimeter portions, and reaveraging, on this basis, the results falling within the raw-water range above stated.

The figures summarized in Table 6 indicate a very fair degree of correspondence between the two series of observations, making due allowance for individual divergences to be expected in them. The only well-marked divergence between the two series appears to be in the residual percentages of both classes of bacteria observed in the water applied to the filters, which represents the product of preliminary coagulation and sedimentation. In this single instance the efficiency of bacterial removal is indicated as having averaged distinctly higher at the five Ohio River plants than as observed at the experimental plant, which difference is explainable, at least in part, by the fact that the arrangements provided for preliminary mixing of the coagulant solutions with the raw water are somewhat less highly elaborated at the experimental plant than at the five Ohio River plants. This divergence, however, is virtually offset by

the greater bacterial efficiency of the filtration stage at the experimental plant, which is sufficient to deliver an over-all efficiency up to and including the unchlorinated filter effluent averaging but 0.4 per cent less than that of the five Ohio River plants as based on the removal of 37° C. plate-growing bacteria, and but 0.04 per cent less as based on the removal of *B. coli*. As far as both the unchlorinated and chlorinated filter effluents are concerned, the residual percentages given in Table 6 indicate no significant differences as existing between the bacterial efficiency of the experimental plant and that of the five Ohio River plants, considered as a group.

To summarize broadly the foregoing observations, they may be regarded as indicating that the over-all bacterial efficiency of the experimental plant, both with and without the aid of chlorination, agrees very closely with the corresponding average efficiency of the five Ohio River municipal plants having the same degree of elaboration as regards the treatment given the water and under similar conditions of raw-water pollution Inasmuch as the five Ohio River plants in question may be taken as fairly representing the average plant of the same type treating water similar to that of the Ohio River, the results obtained from the experimental plant in the respect named should be capable of application to normal conditions of full-scale operation without any substantial modification.

INDICATED LIMITS OF RAW-WATER POLLUTION CONSISTENT WITH PRODUCING EFFLUENTS CONFORMING TO GIVEN STANDARDS OF BACTERIAL QUALITY

On referring to Figure 1 it will be noted that the abscissa of each plot corresponding to a given ordinate defines the average *B. coli* index of the raw water consistent with producing an effluent having a specified *B coli* index. Similarly, a plot of the 37° C. plate-count data given in Table 1 would show the limiting bacterial pollution of the raw water, expressed in these terms, which was found to be consistent with producing an effluent having any assumed bacterial content, as expressed in the same terms. An alternative method of determining these limiting raw-water values would consist in substituting into the general equation, $E=cR^n$, values of c and n as given on page 2134 and calculating, for an assumed value of E, the corresponding raw-water content, R.

In this connection it is of particular interest to determine the limiting average *B. coli* index of the raw water which is indicated as being consistent with producing unchlorinated and chlorinated filter effluents, respectively, conforming to the revised United States Treasury Department *B. coli* standard. By transposing the equation above given it may be written thus: $R=\left(\frac{E}{c}\right)^{\frac{1}{n}}$. Referring to page 2134, the

values of c and n given for the relationship between the *B. coli* index of the raw water and that of the unchlorinated filter effluent are 0.029 and 0.77, respectively. The value of E, as defined by the revised United States Treasury Department standard and expressed in terms of the *B. coli* index, is 1 per 100 cubic centimeters. Substituting these values into the transposed equation, we have

$$R=\left(\frac{1}{0.029}\right)^{\frac{1}{0.77}}=(34.5)^{1.30}=100 \text{ per } 100 \text{ c. c.}$$

Similarly, the value of R consistent with producing a chlorinated effluent conforming to the same standard may be computed thus, taking as c and n the values given on page 2134:

$$R=\left(\frac{1}{0.0008}\right)^{\frac{1}{0.82}}=(1{,}250)^{1.22}=6{,}000 \text{ per } 100 \text{ c. c.}$$

On referring to the plots given in Figure 1, these computed values are approximately confirmed, the former by extrapolating the graph until its ordinate becomes equal to the value 1, representing the revised Treasury Department standard limit.

For comparison with these results, there are available two corresponding raw-water maxima derived from the analysis of an extensive series of data secured from the collective survey of the group of municipal plants which previously has been noted in this paper. From an analysis of these data, made in accordance with the same procedure as has been described, the maximum *B. coli* index of the raw water consistent with producing unchlorinated effluents conforming to the revised Treasury Department standard was indicated as being 60 per 100 cubic centimeters, and the maximum index consistent with producing chlorinated effluents meeting the same standard, 5,000 per 100 cubic centimeters. Making due allowance for observational errors and the "spread" of statistical data of this kind, the agreement between the two series of results is strikingly close. From these results it may be concluded tentatively that the limiting figures above stated are fairly representative of the maximum densities of raw-water *B. coli* which will permit the delivery, by efficiently operated plants treating Ohio River water, of unchlorinated and chlorinated effluents meeting the standard in question. It should be noted in this connection that these criteria refer to averages taken over periods of considerable length, such as a month or a year. It also should be emphasized that the raw-water maxima stated are merely observational ones and are not intended as working standards of raw-water pollution, which, if ultimately developed and applied, must necessarily provide proper factors of safety to take account of short-time fluctuations, both in the degrees of pollution

of different classes of raw waters and in the efficiency of bacterial removal effected by various types of purification processes Data bearing on this question, which have been collected from the surveys of municipal plants and from the current experimental studies, will be presented and discussed in a later paper of this series.

SUMMARY AND CONCLUSIONS

The primary series of experiments in water purification described in this paper have been designed to test experimentally the maximum degrees of raw-water bacterial pollution which are consistent with the production of effluents conforming to given standards of bacterial quality. These experiments, which were carried on over a continuous period of 15 months, embraced all conditions with respect to temperature, season, and character of raw water which are normally encountered in the treatment of Ohio River water and other waters of similar type The experimental plant, which has been described in the first article of this series, was arranged so as to permit the bacterial content and, to some extent, the physical character of the raw water to be varied at will over a wide range The general method of procedure in conducting the experiments consisted in varying over different ranges the bacterial and physical character of the raw water and observing the resultant effects produced on the quality of the effluents as delivered through successive stages of treatment

The results of these observations, only the more outstanding features of which are presented in this paper, have indicated—

1. That a consistent, orderly relationship exists between the bacterial quality of the raw water and that of the effluents produced from it at successive stages of treatment.

2. That this relationship is a simple power function, which can be expressed by the general equation, $E=cR^n$.

3. That the value of c and, to a considerably less extent, of n depends on the kind of bacteria, on the type of process, and on the number of stages of treatment between the source of raw water and that of the particular effluent considered.

4 That the efficiency of *B. coli* removal, and hence the relationship above described, when expressed in these terms, is virtually unaffected by seasonal changes or by variations in raw-water turbidity and is influenced by the density of *B. coli* only at the preliminary stage of coagulation-sedimentation.

5. That the results of observations obtained from the experimental plant may be applied without substantial modification to full-scale municipal plants of the same type and degree of elaboration and treating raw waters of approximately the same physical character and bacterial density.

6. That the indicated maximum limits of raw-water *B. coli*, consistent with producing unchlorinated and chlorinated effluents con-

forming to the revised United States Treasury Department standard, are 100 and 6,000 *B. coli* per 100 cubic centimeter, respectively, as expressed in terms of the *B. coli* index.

7. That these indicated maxima agree closely with corresponding maxima derived from previous collective studies of full-scale municipal plants, of the same type and treating raw waters of the same character, under conditions of their routine operation.

A general conclusion reached thus far from the experimental study has been that its results have confirmed, in every major respect, those of the observations made at full-scale municipal plants under the parallel conditions above stated. In the series of experiments in progress at this writing it is planned to devote further study both to the secondary objective which has been described in this paper and to determining, as far as is possible with the facilities at hand, the effects which are produced on the foregoing relationships by fairly wide differences in the physical character of the raw water. The results thus far secured from the observations made of certain of these effects appear to indicate, as far as is shown in Table 5, that the efficiencies of bacterial purification attained in the treatment of relatively clear raw water are not as widely divergent from those shown in the treatment of turbid water, all other things being equal, as had been anticipated prior to these experiments. Any conclusions drawn from these observations must be regarded, however, as being subject to qualification pending further studies of other factors which have a decided bearing on the problems to be met in the treatment of clear waters, as found along the Great Lakes and in various impounded sources of supply, in contrast with those which are involved in the purification of turbid river waters, such as exist in the inland streams of the United States. The facilities available at the present location of the experimental plant of the Public Health Service are hardly adequate for reproducing all of these factors; nevertheless, they may be utilized for the purpose of showing broadly the differences and the similarities existing between these two classes of water-purification problems. In subsequent papers of this series it is proposed to discuss more fully both the foregoing and other questions having a bearing on the final conclusions to be reached from these studies.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Report of the Malaria Survey of the Jalpaiguri Duars.—Public Health Department of the Government of Bengal, Calcutta, 1926. (Abstract by L. D. Fricks.)

This report is published in pamphlet form and contains 67 pages. The object of the survey was to determine what improvement in the malaria situation had followed measures put into operation for

the control of mosquito production on the Meenglas Tea Estate, Jalpaiguri Duars, Bengal. Based on the assumption that the surest method of abolishing malaria in the long run is reduction or eradication of malaria-carrying mosquitoes, and because of the difficulty of controlling the human factor, coolie labor, extensive antimosquito measures were adopted at Meenglas. These measures consisted of underground drainage of streams, periodic flushing of streams, oiling of streams and pools, deepening, straightening and cleaning of streams. The topography of the locality surveyed is rolling, adjoining as it does the foothills of the Himalayas, and a rapid run-off of storm water takes place Excellent results were reported in taking care of residual water by means of underground or subsoil drains. The internal dimensions of the subsoil drains varied from 6 inches by 9 inches at the intake to 12 inches by 15 inches at the outlet. The drains were constructed of four sets of sized blocks of stone, one forming the base, two forming the sides, and the fourth the top of the drain, these being covered with dirt and turf. The gradient of these drains was 1 in 60 to 1 in 100, which was found sufficient to increase the velocity of water flow. The drains did not choke, except on rare occasions following the displacement of the top stone, and were found adequate to take care of drainage between floods. During heavy rains the storm water usually overflowed the drains. Antimosquito measures were first undertaken on the Meenglas estate in 1917. The system of subsoil drainage was completed in 1919. Oiling of surface water was added in 1919. The survey which is here reported was made in 1925. This survey comprised ten tea gardens or estates, in addition to the one on which antimosquito measures had been carried on for eight years.

The most important conclusions of the surveying party were as follows: (1) Antimosquito operations on the Meenglas Tea Estate had been entirely successful as shown by lower spleen rates observed; (2) unless antimosquito measures are undertaken over a comparatively large area in a highly malarious region, there may be no reduction in malaria because of the influx of mosquitoes from the outside, (3) subsoil drains once constructed require very little further attention; (4) oiling is cheaper than draining, but it requires greater attention to be made to work efficiently

The Disappearance of Malaria in a Village in France due to the Improvement of the Economic Condition of the Inhabitants. Et. Sergent, J. Chassaing and G Fabiani, *Arch. de L'Institut Past. d' Algerie*, Vol. 3, No. 2, 1925, pp. 127–131. (Abstract by M. A. Barber.)

Fifty years ago, Menet, a village of Haute-Auvergne, was malarious, but it is now healthful. The breeding of *Anopheles* there continues to be abundant, no mechanical protection against them has been

practiced, and there has been no change in the number of domestic animals for sixty years; no quinine treatment other than that which is general in France has been employed. The writers attribute the disappearance of malaria to improvement in the "well-being, the comfort, and the prosperity" of the people. They believe that these factors have been as effective in other parts of France, formerly malarious, as in the region described. They state that it is their conviction that one of the most powerful measures practicable in a malarious region is to amend the "Reservoir of virus" constituted by the inhabitants of the region

A List of the Fishes of Algeria Suitable for Use in the Destruction of Mosquito Larvæ. M. le Commandant Cauvet *Arch de L'Inst. Past d'Algerie*, Vol. 3, No. 2, 1925, pp. 146–154. (Abstract by M. A Barber)

A list with illustrations is given of the fishes of Algeria suitable for antimalaria work. The most effective species is *Phoxinellus chaignoni*, which is preferred for the following reasons: It is adaptable to a great variety of waters; it may withstand temperatures over 30° C; it reproduces rapidly, it feeds at all depths of water; and through its great activity, it is more capable than other fishes of escaping its enemies.

Menace of Cross Connections in a Public Water Supply. R. F. Goudey, Resident Engineer, State Board of Health, Los Angeles, Calif *Journal American Water Works Association*, Vol 15, No 5, May, 1926, pp 472–480. (Abstract by Sol Pincus.)

Another forceful discussion is presented of the serious consequences of cross connections in water supply practice. The author shows the great dangers that exist from the presence of such connections, even with check valves and gate valves, which he does not hold are safe and reliable protections. The numerous kinds and varieties of cross connections are referred to. Reference is also made to the many typhoid fever outbreaks attributed to cross connections.

The only remedy to be considered, according to the author, is the total discontinuance of every cross connection with a polluted supply. The author seems to indicate that the cities of Lowell and Philadelphia and the States of Washington and Minnesota are the only localities requiring complete separation of the two supplies; and that these two States with Ohio, Pennsylvania, and California are the only States having regulations controlling cross connections. He claims that the limited attention to this matter is due to the lack of appreciation of the importance of the dangers. (Abstractor's Note: The author's list is very incomplete. Action regulating cross connections has been taken by the cities of Hartford, Chicago, New York, and by the States of Connecticut, New York, Indiana, and Kansas, to cite some additional places.)

DEATHS DURING WEEK ENDED SEPTEMBER 18, 1926

Summary of information received by telegraph from industrial insurance companies for week ended September 18, 1926, and corresponding week of 1925 (From the Weekly Health Index, September 22, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Sept 18, 1926	Corresponding week 1925
Policies in force	65,301,677	61,025,105
Number of death claims	11,485	11,147
Death claims per 1,000 policies in force, annual rate	9.2	9.5

Deaths from all causes in certain large cities of the United States during the week ended September 18, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, September 22, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Sept 18, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Sept 18, 1926 [2]
	Total deaths	Death rate [1]		Week ended Sept 18, 1926	Corresponding week, 1925	
Total (65 cities)	6,048	10.9	10.8	847	894	[3] 66
Akron	28			1	10	11
Albany [4]	26	11.4	10.6	2	3	42
Atlanta	61			9	8	
White	27			3		
Colored	34	(5)		6		
Baltimore [4]	191	12.3	13.0	25	35	73
White	142			19		68
Colored	49	(5)		6		97
Birmingham	49	12.1	12.7	11	7	
White	27			4		
Colored	22	(5)		7		
Boston	160	10.6	10.9	20	26	56
Bridgeport	31			3	1	51
Buffalo	122	11.7	12.8	10	30	42
Cambridge	18	7.7	9.2	2	1	33
Camden	18	7.2	6.5	6	8	101
Canton	20	9.5	3.9	5	0	111
Chicago [4]	606	10.4	9.2	91	85	81
Cincinnati	114	14.5	13.9	19	14	118
Cleveland	177	9.6	9.8	17	40	44
Columbus	59	10.8	13.0	9	13	83
Dallas	48	12.5	10.5	11	8	
White	43			8		
Colored	5	(5)		3		
Dayton	38	11.2	8.1	9	4	141
Denver	75	13.7	14.3	11	10	
Des Moines	27	9.6	9.6	5	2	83
Detroit	252	10.2	11.2	50	53	80
Duluth	22	10.2	11.8	1	4	23
El Paso	25	12.0	10.9	5	1	
Erie	15			2	8	38
Fall River [4]	22	8.8	9.7	4	4	58
Flint	29	11.0	6.0	13	5	215
Fort Worth	22	7.2	9.2	4	7	
White	16			3		
Colored	6	(5)		1		
Grand Rapids	32	10.7	9.8	6	4	87
Houston	51			8	6	
White	35			5		
Colored	16	(5)		3		
Indianapolis	81	11.5	11.9	18	7	132
White	69			16		135
Colored	12	(5)		2		110
Jersey City	56	9.2	8.6	5	11	35
Kansas City, Mo	109	15.2	13.1	18	11	
Los Angeles	192			15	19	42
Louisville	85	14.3	9.5	17	5	146
White	62			13		130
Colored	23	(5)		4		251
Lowell	26			3	4	56

(See footnotes at end of table)

Deaths from all causes in certain large cities of the United States during the week ended September 18, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued.

City	Week ended Sept 18, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Sept 18, 1926
	Total deaths	Death rate		Week ended Sept 18, 1926	Corresponding week, 1925	
Lynn	28	14.0	9.1	4	1	100
Memphis	62	18.3	20.0	7	7	--------
White	31	--------	--------	4	--------	--------
Colored	31	(5)	--------	3	--------	--------
Milwaukee	82	8.3	8.1	7	13	32
Minneapolis	75	9.0	8.7	9	10	50
Nashville [4]	54	20.6	24.9	6	13	--------
White	35	--------	--------	4	--------	--------
Colored	19	(5)	--------	2	--------	--------
New Bedford	25	--------	--------	6	6	104
New Haven	21	6.0	4.7	6	2	82
New Orleans	155	19.3	17.2	20	24	--------
White	87	--------	--------	9	--------	--------
Colored	68	(5)	--------	11	--------	--------
New York	1,130	9.9	9.8	134	151	54
Bronx Borough	139	8.1	8.1	12	7	40
Brooklyn Borough	381	8.9	8.3	53	60	54
Manhattan Borough	477	13.3	13.0	53	68	59
Queens Borough	108	7.4	7.1	14	14	63
Richmond Borough	25	9.1	13.6	2	2	35
Newark, N. J	103	11.7	9.1	17	12	81
Norfolk	39	11.7	9.6	7	6	130
White	14	--------	--------	1	--------	30
Colored	25	(5)	--------	6	--------	298
Oakland	52	10.4	10.9	8	2	93
Oklahoma City	26	--------	--------	2	3	--------
Omaha	67	16.2	11.3	7	5	73
Paterson	23	8.4	7.4	5	2	87
Philadelphia	401	10.4	11.6	59	70	78
Pittsburgh	148	12.1	13.5	29	32	96
Portland, Oreg	49	--------	--------	2	4	20
Providence	56	10.6	9.7	9	6	75
Richmond	51	14.1	12.3	12	12	151
White	30	--------	--------	5	--------	98
Colored	21	(5)	--------	7	--------	245
Rochester	49	8.0	12.3	3	11	24
St Louis	179	11.2	11.0	16	23	--------
St Paul	56	11.8	11.7	3	4	27
Salt Lake City [4]	28	11.0	10.8	4	3	55
San Antonio	60	15.3	14.2	14	10	--------
San Diego	37	17.5	14.8	0	3	0
San Francisco	113	10.4	12.2	3	8	18
Schenectady	12	6.7	9.0	1	3	29
Seattle	71	--------	--------	2	3	10
Somerville	18	9.4	6.3	1	2	26
Spokane	30	14.4	10.1	4	0	94
Springfield, Mass	30	10.8	9.9	0	3	0
Syracuse	51	14.5	10.0	6	3	76
Tacoma	15	7.4	9.5	1	2	23
Toledo	52	9.2	11.6	9	11	87
Trenton	25	9.7	10.7	2	5	33
Utica	34	17.2	9.8	3	4	66
Washington, D C	119	11.8	13.2	15	9	85
White	78	--------	--------	9	--------	74
Colored	41	(5)	--------	6	--------	109
Waterbury	13	--------	--------	3	1	64
Wilmington, Del	27	11.4	9.4	5	5	117
Worcester	41	11.1	9.8	11	8	127
Yonkers	16	7.2	11.0	1	3	22
Youngstown	26	8.2	7.8	5	8	64

[1] Annual rate per 1,000 population
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 63 cities
Deaths for week ended September 17, 1926
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D C, 25.

PREVALENCE OF DISEASE

No health depaitment, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended September 25, 1926

ALABAMA

	Cases
Cerebrospinal meningitis	1
Chicken pox	2
Dengue	1
Diphtheria	51
Influenza	15
Lethargic encephalitis	2
Malaria	133
Measles	10
Mumps	7
Ophthalmia neonatorum	1
Pellagra	6
Pneumonia	25
Scarlet fever	14
Smallpox	1
Tuberculosis	41
Typhoid fever	101
Typhus fever	6
Whooping cough	18

ARIZONA

Diphtheria	1
Measles	1
Scarlet fever	5
Tuberculosis	2

ARKANSAS

Chicken pox	16
Hookworm disease	1
Influenza	21
Malaria	99
Measles	4
Mumps	14
Paratyphoid fever	1
Pellagra	6
Scarlet fever	3
Smallpox	7
Tuberculosis	15
Typhoid fever	32
Whooping cough	21

CALIFORNIA

	Cases
Cerebrospinal meningitis	
Los Angeles	1
San Francisco	1
Chicken pox	75
Diphtheria	165
Influenza	22
Leprosy—Los Angeles	1
Lethargic encephalitis—San Francisco	2
Measles	326
Mumps	84
Poliomyelitis	
Los Angeles	2
Los Angeles County	2
Scarlet fever	97
Smallpox	4
Tuberculosis	130
Typhoid fever	10
Whooping cough	69

COLORADO

Chicken pox	2
Diphtheria	20
Impetigo contagiosa	1
Measles	7
Mumps	2
Pneumonia	1
Scarlet fever	14
Smallpox	6
Tuberculosis	17
Typhoid fever	12
Whooping cough	5

CONNECTICUT

Cerebrospinal meningitis	2
Chicken pox	6
Diphtheria	10
German measles	1
Malaria	2

CONNECTICUT—continued

	Cases
Measles	4
Mumps	3
Pneumonia (broncho)	9
Pneumonia (lobar)	11
Poliomyelitis	2
Scarlet fever	20
Septic sore throat	1
Tuberculosis (all forms)	33
Typhoid fever	10
Whooping cough	25

DELAWARE

Diphtheria	1
Poliomyelitis	1
Scarlet fever	3
Tuberculosis	1
Typhoid fever	3
Whooping cough	2

FLORIDA

Chicken pox	1
Diphtheria	7
Malaria	4
Measles	4
Scarlet fever	3
Smallpox	4
Tuberculosis	6
Typhoid fever	6
Typhus fever	1
Whooping cough	2

GEORGIA

Diphtheria	50
Dysentery	10
Hookworm disease	1
Influenza	18
Malaria	77
Measles	6
Mumps	6
Paratyphoid fever	3
Pellagra	2
Pneumonia	13
Poliomyelitis	1
Scarlet fever	9
Septic sore throat	7
Smallpox	6
Tuberculosis	6
Typhoid fever	74
Whooping cough	11

IDAHO

Chicken pox	1
Diphtheria	7
Measles	1
Mumps	1
Pneumonia	1
Scarlet fever	6
Tuberculosis	2
Typhoid fever	11

ILLINOIS

Chicken pox	39
Diphtheria	80
Influenza	5
Measles	62
Mumps	23
Pneumonia	97

ILLINOIS—continued

	Cases
Poliomyelitis.	
Cook County	3
Edgar County	1
Franklin County	2
Johnson County	4
Piatt County	1
Wayne County	2
Whiteside County	1
Winnebago County	1
Scarlet fever	11
Smallpox	1
Tuberculosis	29
Typhoid fever	
Whooping cough	162

INDIANA

Cerebrospinal meningitis	
Diphtheria	104
Influenza	82
Measles	
Poliomyelitis	
Scarlet fever	54
Smallpox	40
Tuberculosis	54
Typhoid fever	59 63
Whooping cough	35

IOWA

Chicken pox	
Diphtheria	
Measles	
Mumps	73
Scarlet fever	87 78
Smallpox	96
Tuberculosis	20
Typhoid fever	75 51
Whooping cough	8 5

KANSAS

Cerebrospinal meningitis—Garfield	
Chicken pox	
Diphtheria	10
Influenza	6
Lethargic encephalitis—Alamota	1
Measles	11
Mumps	5
Pneumonia	8
Poliomyelitis	
Hutchinson	
Redwing	
Rabies	
Scarlet fever	
Tuberculosis	
Typhoid fever	
Whooping cough	5

LOUISIANA

Cerebrospinal meningitis	1
Diphtheria	12
Malaria	37
Pneumonia	32
Poliomyelitis	2
Scarlet fever	5
Smallpox	7
Tuberculosis	46
Typhoid fever	35

MAINE

	Cases
Chicken pox	9
Diphtheria	2
Influenza	4
Measles	28
Paratyphoid fever	1
Pneumonia	2
Scarlet fever	19
Tetanus	1
berculosis	11
phoid fever	12
cent's angina	2
oping cough	15

MARYLAND [1]

Chicken pox	1
htheria	17
ry	8
measles	1
contagiosa	1
	2
These rep	2
	1
	6
id fever	3
(broncho)	8
umonia (lobar)	7
Ce liomyelitis	4
Charlet fever	21
De ic sore throat	1
Diphtherlosis	56
Influenz fever	72
Lethargiag cough	69
Malaria	

MASSACHUSETTS

Measles x	1
Mumps spinal meningitis	5
Ophtha n pox	23
Pellagr nctivitis (suppurative)	2
Pneun heria	46
Scarle ntery	2
Smal nan measles	8
Influenza	12
Lethargic encephalitis	1
Measles	18
Mumps	32
Ophthalmia neonatorum	30
Dip llagra	1
Me umonia (lobar)	40
Sca liomyelitis	16
Tu rlet fever	80
tic sore throat	3
anus	1
Ch chorna	2
H uberculosis (pulmonary)	86
In uberculosis (other forms)	26
M yphoid fever	16
M Whooping cough	98

MICHIGAN

Diphtheria	111
Measles	9
Pneumonia	25
Scarlet fever	88
Smallpox	5
Tuberculosis	84
Typhoid fever	49
Whooping cough	133

[1] Week ended Friday

MINNESOTA

	Cases
Chicken pox	14
Diphtheria	46
Influenza	2
Measles	15
Scarlet fever	103
Tuberculosis	50
Typhoid fever	8
Whooping cough	20

MISSISSIPPI

Diphtheria	21
Scarlet fever	6
Smallpox	1
Typhoid fever	23

MISSOURI

(Exclusive of Kansas City and St Louis)

Chicken pox	1
Diphtheria	9
Epidemic sore throat	3
Influenza	1
Malaria	2
Measles	13
Poliomyelitis	2
Scarlet fever	41
Smallpox	6
Tuberculosis	4
Typhoid fever	29
Whooping cough	7

MONTANA

Cerebrospinal meningitis	1
Chicken pox	2
Diphtheria	6
Measles	4
Mumps	1
Smallpox	9
Typhoid fever	2
Whooping cough	6

NEBRASKA

Chicken pox	3
Diphtheria	10
Mumps	2
Scarlet fever	9
Smallpox	4
Tuberculosis	15
Typhoid fever	5
Whooping cough	12

NEW JERSEY

Cerebrospinal meningitis	1
Chicken pox	18
Diphtheria	59
Dysentery	1
Influenza	1
Measles	7
Paratyphoid fever	1
Pneumonia	30
Poliomyelitis	3
Scarlet fever	49
Typhoid fever	35
Whooping cough	100

NEW MEXICO

	Cases
Chicken pox	1
Conjunctivitis	1
Diphtheria	1
Malaria	6
Measles	1
Mumps	1
Paratyphoid fever	1
Pellagra	1
Pneumonia	1
Puerperal septicemia	1
Rabies (in animals)	1
Scarlet fever	4
Tuberculosis	40
Typhoid fever	16
Whooping cough	8

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	1
Chicken pox	42
Diphtheria	33
Dysentery	2
German measles	17
Influenza	4
Malaria	1
Measles	59
Mumps	29
Pneumonia	75
Poliomyelitis	41
Scarlet fever	60
Septic sore throat	4
Smallpox	1
Typhoid fever	62
Vincent's angina	11
Whooping cough	184

NORTH CAROLINA

Cerebrospinal meningitis	1
Chicken pox	5
Diphtheria	135
Dysentery (bacillary)	3
Malaria	28
Measles	11
Poliomyelitis	1
Scarlet fever	68
Septic sore throat	4
Smallpox	7
Typhoid fever	55
Whooping cough	229

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Diphtheria	28
Influenza	15
Malaria	144
Measles	6
Pellagra	4
Pneumonia	8
Poliomyelitis	5
Scarlet fever	16
Typhoid fever	122
Whooping cough	10

[2] Deaths.

OREGON

	Cases
Chicken pox	7
Diphtheria	6
Influenza	10
Malaria	1
Measles	7
Mumps	11
Pneumonia	[2] 4
Scarlet fever	20
Smallpox	2
Tuberculosis	[2] 3
Typhoid fever	9
Whooping cough	1

PENNSYLVANIA

Cerebrospinal meningitis—Philadelphia	1
Chicken pox	45
Diphtheria	94
German measles	4
Impetigo contagiosa	14
Lethargic encephalitis—Allegheny County	1
Measles	102
Mumps	11
Ophthalmia neonatorum—Philadelphia	4
Pneumonia	14
Poliomyelitis	
Bucks County	1
Indiana County	1
Philadelphia	1
Seward	1
Wyoming County	1
Scabies	7
Scarlet fever	126
Tetanus	
Reading	1
York County	1
Tuberculosis	92
Typhoid fever	87
Whooping cough	247

RHODE ISLAND

Diphtheria	5
German measles	2
Measles	3
Mumps	1
Scarlet fever	8
Tuberculosis	4
Whooping cough	5

SOUTH DAKOTA

Diphtheria	2
Measles	41
Pneumonia	1
Poliomyelitis	1
Scarlet fever	21
Typhoid fever	1
Whooping cough	3

TENNESSEE

Cerebrospinal meningitis—Dyer County	1
Chicken pox	6
Diphtheria	86
Dysentery	6
Influenza	11
Malaria	95

TENNESSEE—continued

	Cases
Measles	7
Mumps	1
Ophthalmia neonatorum	1
Pellagra	1
Pneumonia	8
Poliomyelitis	
Bedford County	1
Crockett County	1
Hamilton County	1
Hickman County	1
Rabies	1
Scarlet fever	32
Tuberculosis	41
Typhoid fever	223
Whooping cough	70

TEXAS

	Cases
Chicken pox	1
Diphtheria	18
Measles	1
Mumps	1
Pneumonia	4
Scarlet fever	9
Smallpox	1
Tuberculosis	15
Typhoid fever	29
Whooping cough	11

UTAH

	Cases
Chicken pox	8
Diphtheria	7
Measles	13
Mumps	2
Scarlet fever	6
Typhoid fever	2
Whooping cough	8

VERMONT

	Cases
Chicken pox	2
Measles	15
Mumps	2
Scarlet fever	5
Whooping cough	27

WASHINGTON

	Cases
Cerebrospinal meningitis—Lewis County	1
Chicken pox	8
Diphtheria	27
German measles	2
Measles	6
Mumps	14

WASHINGTON—continued

	Cases
Poliomyelitis	1
Scarlet fever	24
Smallpox	11
Tuberculosis	21
Typhoid fever	19
Whooping cough	16

WEST VIRGINIA

	Cases
Chicken pox	3
Diphtheria	20
Influenza	7
Measles	17
Scarlet fever	27
Smallpox	8
Tuberculosis	15
Typhoid fever	42
Whooping cough	56

WISCONSIN

	Cases
Milwaukee	
Chicken pox	3
Diphtheria	8
Measles	3
Mumps	4
Pneumonia	9
Scarlet fever	11
Tuberculosis	8
Typhoid fever	1
Whooping cough	60
Scattering	
Chicken pox	5
Diphtheria	13
German measles	3
Influenza	30
Measles	51
Mumps	5
Pneumonia	2
Poliomyelitis	1
Scarlet fever	35
Smallpox	4
Tuberculosis	10
Typhoid fever	5
Whooping cough	101

WYOMING

	Cases
Chicken pox	8
Diphtheria	1
German measles	2
Measles	4
Scarlet fever	13
Typhoid fever	1
Whooping cough	1

Reports for Week Ended September 18, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	7
Diphtheria	11
Influenza	1
Pellagra	1
Pneumonia	11
Scarlet fever	1
Tuberculosis	29
Typhoid fever	7
Whooping cough	10

NORTH DAKOTA

	Cases
Diphtheria	4
German measles	1
Measles	5
Mumps	4
Pneumonia	1
Poliomyelitis	2
Scarlet fever	30
Smallpox	18
Tuberculosis	1
Typhoid fever	3
Whooping cough	24

SOUTH CAROLINA

	Cases
Chicken pox	8
Diphtheria	43
Hookworm disease	41
Influenza	146
Malaria	699
Measles	5
Paratyphoid fever	5

SOUTH CAROLINA—continued

	Cases
Pellagra	44
Scarlet fever	11
Smallpox	1
Tuberculosis	35
Typhoid fever	101
Whooping cough	24

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
August, 1926										
Alabama	1	67	26	374	69	52	3	43	25	479
Colorado	0	85	5	1	25		3	31	2	64
Illinois	3	204	185	7	499	1	19	297	18	215
Kansas	5	46	14	6	42	1	12	85	11	134
Louisiana	0	56	40	125	3	28	3	17	33	163
Maine	0	7	6		98		0	63	0	13
Maryland	3	46	8	5	67	1	10	31	0	168
Massachusetts	2	127	10	4	200	3	75	290	0	74
Michigan	0	326	2		241		16	268	43	73
Minnesota	0	148	14		95		5	320	7	38
Missouri	4	81	4	10	60	1	3	121	22	218
New York	16	548	65	39	825		181	305	22	303
North Carolina	3	149		60	171		27	89	129	377
North Dakota		16	1		62		0	101	6	9
Ohio	12	348	9	2	131		36	271	37	224
Oklahoma [1]	9	36	127	539	56	62	0	40	1	518
South Carolina	0	76	228	1,557	11	343	7	23	35	588
Vermont	0	14			35		0	5	0	7
West Virginia	1	65	61		106		1	68	13	128
Wyoming	0	3			8		0	17	0	4

[1] Exclusive of Tulsa and Oklahoma City

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of August, 1926, to other State health departments by departments of health of certain States

Referred by—	Measles	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever
California				8	
Connecticut		2			
Illinois	1			31	4
Minnesota		2		29	4
New York		1	1	4	3

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended September 11, 1926, 36 States reported 832 cases of diphtheria. For the week ended September 12, 1925, the same States reported 1,039 cases of this disease. Ninety-nine cities, situated in all parts of the country and having an aggregate population of nearly 30,000,000, reported 438 cases of diphtheria

for the week ended September 11, 1926 Last year for the corresponding week they reported 523 cases. The estimated expectancy for these cities was 613 cases The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles—Thirty-five States reported 635 cases of measles for the week ended September 11, 1926, and 290 cases of this disease for the week ended September 12, 1925. Ninety-nine cities reported 152 cases of measles for the week this year, and 126 cases last year.

Poliomyelitis—The health officers of 35 States reported 118 cases of poliomyelitis for the week ended September 11, 1926. The same States reported 255 cases for the week ended September 12, 1925.

Scarlet fever—Scarlet fever was reported for the week as follows: Thirty-six States—this year, 831 cases; last year, 801 cases; 99 cities—this year, 334 cases; last year, 290 cases, estimated expectancy, 302 cases

Smallpox.—For the week ended September 11, 1926, 36 States reported 147 cases of smallpox. Last year for the corresponding week they reported 81 cases. Ninety-nine cities reported smallpox for the week as follows: 1926, 11 cases, 1925, 31 cases, estimated expectancy, 20 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—One thousand two hundred and thirty-four cases of typhoid fever were reported for the week ended September 11, 1926, by 36 States. For the corresponding week of 1925, the same States reported 1,231 cases of this disease. Ninety-nine cities reported 255 cases of typhoid fever for the week this year, and 230 cases for the corresponding week last year. The estimated expectancy for these cities was 241 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 93 cities, with a population of more than 29,200,000, as follows: 1926, 311 deaths; 1925, 361 deaths.

City reports for week ended September 11, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine:									
Portland	75,333	1	1	0	0	0	0	0	1
New Hampshire:									
Concord	22,546	0	0	0	0	0	3	0	0
Manchester	83,097	0	2	0	0	0	0	0	2
Vermont:									
Barre	10,008	0	0	0	0	0	0	1	0
Burlington	24,089	0	1	0	0	0	0	0	0
Massachusetts:									
Boston	779,620	8	32	11	0	0	5	9	7
Fall River	128,993	1	2	0	0	0	2	0	1
Springfield	142,065	0	2	1	0	0	0	0	0
Worcester	190,757	1	4	1	0	0	3	0	1
Rhode Island:									
Pawtucket	69,760	0	0	0	0	0	0	0	0
Providence	267,918	0	3	0	0	0	1	0	1
Connecticut:									
Bridgeport	(1)	0	4	3	0	0	0	0	1
Hartford	160,197	0	4	0	0	0	0	0	4
New Haven	178,927	2	2	0	0	0	1	0	1
MIDDLE ATLANTIC									
New York:									
Buffalo	538,016	0	14	3	------	0	0	2	4
New York	5,873,356	12	99	67	4	5	9	15	72
Rochester	316,786	0	4	3	------	1	2	0	1
Syracuse	182,003	0	4	1	------	0	5	0	4
New Jersey:									
Camden	128,642	1	1	1	0	0	0	0	2
Newark	452,513	------	8	------	------	------	------	------	------
Trenton	132,020	0	3	0	0	0	0	0	4
Pennsylvania:									
Philadelphia	1,979,364	5	37	25	------	1	2	1	26
Pittsburgh	631,563	1	16	2	------	1	3	0	15
Reading	112,707	0	3	0	------	0	0	0	1
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409,333	0	8	6	0	0	2	1	2
Cleveland	936,485	3	23	25	0	1	0	2	11
Columbus	279,836	0	3	1	0	0	1	0	2
Toledo	287,380	0	7	1	0	0	0	0	1
Indiana:									
Fort Wayne	97,846	0	2	1	0	0	0	0	1
Indianapolis	358,819	0	6	4	0	0	0	0	3
South Bend	80,091	1	1	1	0	0	2	0	0
Terre Haute	71,071	0	1	0	0	0	0	0	0
Illinois:									
Chicago	2,995,239	8	64	24	6	3	11	1	17
Peoria	81,564	0	1	0	0	0	0	0	0
Springfield	63,923	1	1	0	0	0	2	0	0
Michigan:									
Detroit	1,245,824	3	30	36	2	0	0	0	10
Flint	130,316	0	5	2	0	0	0	0	0
Grand Rapids	153,698	1	2	1	0	0	1	0	0

[1] No estimate made

City reports for week ended September 11, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Wisconsin									
Kenosha	50,891	0	1	0	0	0	2	0	0
Madison	46,385	0	1	3	0	0	0	0	0
Milwaukee	509,192	7	12	9	0	2	5	3	7
Racine	67,707	0	1	0	0	0	2	1	1
Superior	39,671	0	0	5	0	0	1	0	0
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	5	2	0	0	0	2	0	0
Minneapolis	425 435	2	18	13	0	0	0	0	1
St Paul	246,001	6	14	5	0	0	0	0	5
Iowa									
Davenport	52,469	0	1	1	0	-------	0	0	-------
Sioux City	76,411	0	1	1	0	-------	1	0	-------
Waterloo	36,771	0	0	0	0	-------	0	0	-------
Missouri									
Kansas City	367,481	0	5	1	0	0	1	1	5
St Joseph	78,342	0	1	2	0	0	0	0	0
St Louis	821,543	2	19	13	0	0	1	0	-------
North Dakota									
Fargo	26,403	0	0	0	0	0	0	1	0
Grand Forks	14,811	0	0	0	0	-------	0	0	-------
South Dakota									
Aberdeen	15 036	0	1	0	0	-------	0	0	-------
Nebraska									
Lincoln	60,941	0	0	0	0	0	0	1	0
Omaha	211,768	0	10	1	0	0	0	0	2
Kansas									
Topeka	55,411	0	0	0	0	0	0	0	0
Wichita	88,367	1	1	1	0	0	0	0	1
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	1	2	0	0	0	0	0
Maryland									
Baltimore	796,296	5	14	21	1	0	2	1	11
Cumberland	33,741	0	0	2	0	0	0	0	0
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia:									
Washington	497,906	0	5	11	0	0	0	0	5
Virginia									
Lynchburg	30,395	0	1	2	0	0	0	0	0
Norfolk	(1)	0	0	0	0	0	0	0	0
Richmond	186,403	0	12	15	0	0	3	0	1
Roanoke	58,208	6	4	0	0	0	0	0	0
West Virginia									
Charleston	49,019	0	2	0	0	0	0	0	0
Huntington	63,485	0	1	0	0	-------	0	0	-------
Wheeling	56,208	2	1	0	0	0	0	0	1
North Carolina									
Raleigh	30,371	0	2	2	0	0	0	0	0
Wilmington	37,061	0	1	0	0	0	0	0	1
Winston-Salem	69,031	0	2	1	0	0	0	0	1
South Carolina									
Charleston	73,125	0	0	1	4	0	0	0	0
Columbia	41,225	0	1	0	0	0	0	0	0
Greenville	27,311	-------	1	-------	-------	-------	-------	-------	-------
Georgia									
Atlanta	(1)	0	5	10	2	0	1	0	2
Brunswick	16,809	0	0	0	0	0	1	0	0
Savannah	93,134	0	1	0	0	0	0	1	0
Florida									
Miami	69,754	0	-------	1	0	0	1	0	2
St Petersburg	26,847	-------	0	-------	-------	0	-------	-------	0
Tampa	94,743	0	1	5	0	0	3	0	0

[1] No estimate made.

City reports for week ended September 11, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	0	1	0	0	0	0	1
Louisville	305,935	0	5	3	0	0	0	0	4
Tennessee									
Memphis	174,533	0	5	1	0	0	0	0	1
Nashville	136,220	0	2	10	0	0	0	0	1
Alabama									
Birmingham	205,670	0	4	1	1	0	3	0	1
Mobile	65,955	0	1	1	0	0	0	0	0
Montgomery	46,481	0	1	3	0	0	0	0	0
[1] No estimate made									
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	31,643	0	0	0	0		0	0	
Little Rock	74,216	0	0	0	0	0	0	0	1
Louisiana:									
New Orleans	414,493	0	7	8	3	3	1	0	7
Shreveport	57,857	0	1	2	0	0	0	0	0
Oklahoma									
Oklahoma City	(1)	0	2	0	0	0	0	0	2
Texas:									
Dallas	194,450	2	4	4	2	1	0	0	1
Galveston	48,375	0	0	0	0	0	0	0	1
Houston	164,954	0	2	5	0	0	0	0	10
San Antonio	198,069	0	1	1	0	0	0	0	2
MOUNTAIN									
Montana:									
Billings	17,971	1	1	1	0	0	0		0
Great Falls	29,883	0	0	0	0	0	0	0	2
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	0	0	0	0	0	0	1	0
Idaho:									
Boise	23,042	0	0	0	0	0	0	2	0
Colorado:									
Denver	280,911	1	10	13		3	7	0	3
Pueblo	43,787	0	5	1	0	0	0	0	0
New Mexico:									
Albuquerque	21,000	0	0	1	0	0	1	0	1
Arizona:									
Phoenix	38,669	0	0	0	0	0	0	0	0
Utah:									
Salt Lake City	130,948	3	2	4	0	1	4	1	2
Nevada:									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	(1)	4	3	1	0		2	4	
Spokane	108,897	1	1	2	0		0	0	
Tacoma	104,455	1	2	4	0	0	0	0	1
Oregon:									
Portland	282,383	4	4	1	0	0	1	1	3
California:									
Los Angeles	(1)	5	22	15	8	0	8	4	8
Sacramento	72,260	0	2	6	0	0	1	3	3
San Francisco	557,530	21	13	6	0	0	48	3	4

[1] No estimate made.

City reports for week ended September 11, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine											
Portland	1	1	0	0	0	0	1	0	0	3	17
New Hampshire											
Concord	0	0	0	0	0	0	0	0	0	0	3
Manchester	0	2	0	0	0	1	0	0	0	0	33
Vermont											
Barre	0	0	0	0	0	0	0	0	0	0	3
Burlington	0	0	0	0	0	1	0	0	0	5	7
Massachusetts											
Boston	13	19	0	0	0	9	5	2	1	29	163
Fall River	1	0	0	0	0	2	2	0	0	18	35
Springfield	2	0	0	0	0	3	1	0	0	6	26
Worcester	2	8	0	0	0	2	0	1	0	3	--------
Rhode Island											
Pawtucket	0	0	0	0	0	0	0	0	0	0	13
Providence	2	0	0	0	0	5	1	0	0	0	46
Connecticut											
Bridgeport	2	4	0	0	0	0	1	0	0	1	27
Hartford	2	1	0	0	0	1	2	1	0	2	36
New Haven	2	1	0	0	0	0	4	3	0	2	25
MIDDLE ATLANTIC											
New York											
Buffalo	6	4	0	0	0	8	3	0	0	7	120
New York	27	28	0	0	0	[1] 80	46	48	3	40	1,143
Rochester	3	2	0	0	0	3	1	1	1	4	55
Syracuse	3	1	0	0	0	0	2	1	0	4	31
New Jersey											
Camden	1	0	0	0	0	0	1	1	1	0	30
Newark	4	--------	0	--------	--------	--------	2	--------	--------	--------	--------
Trenton	0	1	0	0	0	4	2	0	1	0	35
Pennsylvania											
Philadelphia	17	19	0	0	0	27	13	5	2	25	395
Pittsburgh	12	5	0	0	0	11	4	4	0	20	116
Reading	1	0	0	0	0	0	2	2	0	5	27
EAST NORTH CENTRAL											
Ohio											
Cincinnati	4	3	0	1	0	7	2	5	0	23	117
Cleveland	10	8	0	0	0	10	5	6	1	29	144
Columbus	2	10	0	0	0	2	2	2	0	19	63
Toledo	5	3	0	0	0	0	3	1	0	25	52
Indiana											
Fort Wayne	1	2	0	0	0	0	2	0	0	0	26
Indianapolis	3	2	0	1	0	2	3	2	0	8	62
South Bend	1	1	0	0	0	3	0	0	0	0	12
Terre Haute	1	1	0	0	0	0	0	0	0	3	11
Illinois											
Chicago	31	23	1	0	0	27	8	5	3	72	508
Peoria	2	1	0	0	0	1	0	0	0	4	16
Springfield	0	1	1	0	0	1	1	0	0	1	17
Michigan											
Detroit	25	17	2	0	0	27	5	4	2	55	263
Flint	3	4	0	1	0	1	1	0	0	1	18
Grand Rapids	3	6	1	0	0	3	0	1	0	2	26
Wisconsin											
Kenosha	0	0	1	0	0	1	0	0	0	19	6
Madison	1	1	0	0	0	0	0	0	0	1	9
Milwaukee	11	11	1	0	0	7	1	1	0	75	103
Racine	2	0	0	0	0	1	0	3	0	0	9
Superior	1	1	0	0	0	1	0	0	0	0	13

[1] Pulmonary tuberculosis only.

City reports for week ended September 11, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST NORTH CENTRAL											
Minnesota											
Duluth	4	4	0	0	0	0	0	0	0	0	13
Minneapolis	12	13	1	0	0	3	2	1	0	3	59
St Paul	5	12	1	0	0	2	2	5	0	6	51
Iowa											
Davenport	1	0	0	0	--------	--------	0	0	--------	0	--------
Sioux City	1	0	0	0	--------	--------	0	0	--------	1	--------
Waterloo	0	2	0	0	--------	--------	1	0	--------	2	--------
Missouri											
Kansas City	3	1	0	0	0	4	3	1	1	3	65
St Joseph	1	1	0	0	0	0	1	0	0	0	24
St Louis	11	9	1	0	0	9	7	15	2	17	166
North Dakota											
Fargo	0	1	0	0	0	0	0	1	0	4	3
Grand Forks	1	4	0	0	--------	--------	0	2	--------	0	--------
South Dakota											
Aberdeen	2	0	0	0	--------	--------	0	0	--------	2	--------
Nebraska											
Lincoln	0	0	0	0	0	0	0	0	0	4	6
Omaha	2	1	0	1	0	3	1	1	0	0	46
Kansas											
Topeka	2	1	0	0	0	1	1	0	0	10	11
Wichita	1	1	0	0	0	1	2	1	0	4	28
SOUTH ATLANTIC											
Delaware											
Wilmington	1	1	0	0	0	1	0	0	0	1	19
Maryland:											
Baltimore	6	7	0	0	0	4	10	11	4	81	189
Cumberland	0	0	0	0	0	1	1	0	0	0	10
Frederick	0	0	0	0	0	0	0	0	0	0	3
District of Columbia											
Washington	4	6	0	0	0	5	5	1		1	98
Virginia											
Lynchburg	0	1	0	0	0	0	1	1	0	2	9
Norfolk	1	0	0	0	0	2	1	5	0	18	--------
Richmond	4	2	0	0	0	2	3	3	0	0	44
Roanoke	0	2	0	0	0	1	2	0	0	0	16
West Virginia											
Charleston	1	0	1	0	0	0	2	11	0	1	16
Huntington	1	0	0	0	--------	--------	0	0	--------	0	--------
Wheeling	2	0	0	0	0	0	2	3	0	1	13
North Carolina											
Raleigh	0	2	0	0	0	0	0	1	1	7	12
Wilmington	0	4	0	0	0	0	0	0	0	6	11
Winston - Salem	0	0	0	0	0	0	2	3	0	3	15
South Carolina.											
Charleston	0	0	0	0	0	1	3	7	1	0	17
Columbia	0	1	0	0	0	0	1	0	0	0	--------
Greenville	0	--------	0	--------	--------	--------	0	--------	--------	--------	--------
Georgia											
Atlanta	4	3	0	0	0	6	4	6	2	2	74
Brunswick	0	0	0	0	0	0	0	0	0	0	3
Savannah	0	0	0	1	0	4	1	0	0	0	24
Florida:											
Miami	--------	1	--------	0	0	0	--------	1	0	4	31
St. Petersburg	0	--------	0	--------	0	0	0	--------	0	--------	4
Tampa	0	1	0	0	0	2	0	4	1	0	20
EAST SOUTH CENTRAL											
Kentucky:											
Covington	1	1	0	0	0	1	0	2	0	0	12
Louisville	1	7	0	0	0	10	6	10	1	33	76
Tennessee:											
Memphis	1	5	0	0	0	5	6	20	1	11	62
Nashville	2	2	0	0	0	1	6	19	2	15	46
Alabama:											
Birmingham	4	5	0	0	0	3	6	2	2	11	59
Mobile	1	1	1	0	0	1	1	2	0	0	14
Montgomery	0	0	0	0	0	0	1	0	0	0	11

City reports for week ended September 11, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	0	0			0	0		8	
Little Rock	1	1	0	0	0	1	2	1	0	0	
Louisiana											
New Orleans	1	2	0	0	0	12	5	3	0	0	128
Shreveport	0	2	0	0	0	3	5	0	0	0	28
Oklahoma											
Oklahoma City	1	1	1	0	0	0	2	1	1	0	27
Texas											
Dallas	1	2	0	0	0	3	3	1	0	0	43
Galveston	0	1	0	0	0	2	1	0	0	0	12
Houston	0	1	1	0	0	3	1	3	2	0	60
San Antonio	1	2	0	0	0	10	0	1	0	0	56
MOUNTAIN											
Montana											
Billings	0	0	0	0	0	0	0	0	0	1	2
Great Falls	0	0	1	0	0	0	0	1	0	0	6
Helena	0	0	0	0	0	0	0	0	0	0	3
Missoula	0	1	0	0	0	0	1	0	0	0	4
Idaho											
Boise	0	0	0	0	0	0	0	0	0	1	5
Colorado											
Denver	3	6	2	0	0	5	4	1	0	0	70
Pueblo	0	0	0	0	0	0	1	0	0	0	8
New Mexico											
Albuquerque	0	0	0	0	0	7	2	0	0	0	17
Arizona											
Phoenix		1	0	0	0	6	0	0	0	0	21
Utah											
Salt Lake City	1	1	0	0	0	2	2	0	0	8	33
Nevada											
Reno	0	0	0	0	0	0	0	0	0	0	2
PACIFIC											
Washington											
Seattle	4	7	0	0			2	4		1	
Spokane	4	5	1	0			0	0		1	
Tacoma	2	1	1	4	0	1	1	0	0	0	27
Oregon											
Portland	3	8	3	2	0	2	1	0	0	1	53
California											
Los Angeles	6	14	2	1	0	29	5	2	0	6	186
Sacramento	1	0	0	1	0	1	1	3	0	0	16
San Francisco	5	6	1	0	0	8	2	1	2	1	122

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis (infantile paralysis): Cases	Poliomyelitis (infantile paralysis): Deaths
NEW ENGLAND									
Massachusetts									
Boston	0	0	2	0	0	0	2	1	0
Fall River	1	0	0	0	0	0	1	6	0
Springfield	0	0	0	0	0	0	0	7	0
Worcester	0	0	0	0	0	0	0	4	0
Rhode Island									
Providence	0	0	0	1	0	0	1	2	0
Connecticut									
Hartford	0	0	1	1	0	0	0	2	0

City reports for week ended September 11, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
MIDDLE ATLANTIC									
New York									
Buffalo	0	0	0	0	0	0	1	14	1
New York	2	0	4	0	0	1	10	8	3
Rochester	0	0	0	0	0	0	0	1	0
Syracuse	0	0	0	0	0	0	1	7	0
EAST NORTH CENTRAL									
Ohio									
Cleveland	1	1	0	0	0	0	1	0	0
Toledo	0	0	2	0	0	0	1	0	0
Illinois									
Chicago	1	0	1	0	0	0	5	0	0
Peoria	0	1	0	0	0	0	0	0	0
Michigan.									
Detroit	0	0	1	1	0	0	1	1	0
Wisconsin.									
Milwaukee	2	0	0	0	0	0	1	0	0
WEST NORTH CENTRAL									
Nebraska:									
Omaha	0	0	0	0	0	0	1	1	0
SOUTH ATLANTIC									
Maryland									
Baltimore	1	0	1	2	0	0	1	2	1
District of Columbia									
Washington	0	0	0	0	2	1	0	0	0
Virginia									
Roanoke	0	0	0	0	0	0	0	1	0
South Carolina									
Charleston [1]	0	0	0	0	1	0	0	0	0
Columbia	0	0	0	0	0	0	0	1	0
Georgia·									
Atlanta	0	0	0	0	1	0	0	0	0
Savannah	0	0	0	0	0	1	0	0	0
Florida									
Tampa	0	0	0	0	0	0	0	1	0
EAST SOUTH CENTRAL									
Kentucky·									
Louisville	0	0	0	0	0	1	0	0	0
Tennessee.									
Memphis	0	0	0	0	1	0	0	0	0
Nashville	0	0	0	0	0	1	0	0	0
Alabama·									
Birmingham	0	0	0	0	1	1	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	1	0	0	0
Texas									
Dallas	0	0	0	0	2	2	1	0	0
MOUNTAIN									
Montana:									
Missoula	1	0	0	0	0	0	0	0	0
PACIFIC									
Washington·									
Seattle	1	0	0	0	0	0	0	0	0
Spokane	1	0	0	0	0	0	0	0	0
California:									
Los Angeles	0	0	0	0	.	0	1	3	0
San Francisco	0	0	0	0	0	0	0	1	0

[1] Dengue: 2 cases at Charleston, S C.

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended September 11, 1926, compared with those for a like period ended September 12, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925, and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926 The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below

Summary of weekly reports from cities, August 8 to September 11, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept. 12, 1925	Sept. 11, 1926
101 cities	77	[2] 69	68	[3] 68	[4] 72	[2] 65	[5] 70	74	92	[6] 76
New England	69	31	50	47	41	50	43	26	74	38
Middle Atlantic	78	62	73	59	63	56	61	59	89	[7] 53
East North Central	68	[2] 101	51	[2] 87	68	[2] 75	57	101	70	80
West North Central	108	56	100	83	117	81	100	66	143	75
South Atlantic	69	49	60	60	[4] 68	62	106	69	119	[4] 137
East South Central	32	57	58	21	37	57	32	42	74	104
West South Central	48	26	57	[8] 66	92	34	31	60	119	86
Mountain	157	73	74	146	166	73	305	91	194	173
Pacific	80	105	110	62	105	92	[5] 76	135	75	92

MEASLES CASE RATES

	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept. 12, 1925	Sept. 11, 1926
101 cities	46	[2] 57	30	[3] 41	[4] 27	[2] 27	[5] 22	25	22	[6] 26
New England	125	69	93	52	86	38	50	33	91	35
Middle Atlantic	57	33	38	27	34	15	25	17	25	[7] 11
East North Central	35	[2] 77	21	[2] 60	20	[2] 32	20	30	16	18
West North Central	25	66	6	28	4	20	6	10	4	10
South Atlantic	40	81	33	36	[4] 23	15	23	9	21	[4] 19
East South Central	16	31	5	36	11	36	0	31	0	16
West South Central	9	4	9	[8] 9	0	4	0	0	4	4
Mountain	18	64	28	18	28	27	0	36	9	100
Pacific	19	94	11	78	6	94	[5] 26	92	8	159

SCARLET FEVER CASE RATES

	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept. 12, 1925	Sept. 11, 1926
101 cities	57	[2] 51	51	[3] 48	[4] 45	[2] 55	[5] 54	51	51	[6] 58
New England	81	69	89	73	67	54	46	59	62	80
Middle Atlantic	36	30	23	29	27	32	30	25	31	[7] 31
East North Central	54	[2] 56	54	[2] 47	45	[2] 55	58	59	57	62
West North Central	131	119	145	119	110	133	123	131	102	93
South Atlantic	38	30	40	39	[4] 39	58	56	38	54	[4] 57
East South Central	37	47	32	36	26	62	131	57	110	109
West South Central	66	22	48	[8] 18	18	26	35	26	31	47
Mountain	92	36	65	36	28	64	74	82	37	73
Pacific	83	86	41	78	66	75	[5] 50	70	86	89

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported Populations used are estimated as of July 1, 1925, and 1926, respectively.
[2] Madison, Wis, not included
[3] Madison, Wis, and Fort Smith, Ark, not included.
[4] Greenville, S Car, not included
[5] Spokane, Wash, not included.
[6] Newark, N J, and Greenville, S Car, not included.
[7] Newark, N J, not included
[8] Fort Smith, Ark, not included.

Summary of weekly reports from cities, August 8 to September 11, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925

SMALLPOX CASE RATES

	Week ended—									
	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926
101 cities	7	[2] 7	6	[3] 2	[4] 8	[2] 4	[5] 5	2	5	[6] 2
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	1	1	0	0	1	0	[7] 0
East North Central	3	[2] 1	2	[2] 2	8	[2] 7	5	0	2	2
West North Central	16	4	6	4	4	0	4	0	0	2
South Atlantic	2	11	4	6	[4] 12	9	2	9	12	[4] 2
East South Central	21	26	37	5	53	0	11	10	21	0
West South Central	9	22	4	[8] 0	13	9	4	4	4	0
Mountain	9	73	9	0	9	0	9	0	18	0
Pacific	64	32	41	5	28	13	[5] 38	13	41	16

TYPHOID FEVER CASE RATES

	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926
101 cities	46	[2] 35	55	[3] 41	[4] 45	[2] 40	[5] 38	40	41	[6] 44
New England	38	17	31	17	26	19	29	12	34	17
Middle Atlantic	33	24	44	34	30	39	29	34	27	[7] 32
East North Central	17	[2] 19	29	[2] 17	26	[2] 18	17	20	20	20
West North Central	55	24	47	48	35	42	22	42	57	50
South Atlantic	86	100	104	94	[4] 89	56	58	92	48	[4] 106
East South Central	200	140	168	187	163	233	168	176	226	285
West South Central	97	47	128	[8] 44	106	39	167	43	70	39
Mountain	102	73	102	[illegible]	111	18	28	9	129	18
Pacific	41	30	61	24	52	38	[5] 29	46	28	27

INFLUENZA DEATH RATES

	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926
95 cities	2	[2] 1	2	[3] 3	[4] 3	[2] 3	2	3	4	[6] 4
New England	0	0	0	0	0	0	0	0	2	0
Middle Atlantic	3	1	2	1	3	3	3	2	3	[7] 4
East North Central	3	[2] 0	1	[2] 3	4	[2] 3	3	4	7	4
West North Central	0	2	0	2	2	8	2	4	0	0
South Atlantic	0	0	0	2	[4] 2	2	2	0	0	[4] 0
East South Central	5	10	11	0	5	0	0	16	5	0
West South Central	0	14	10	28	15	5	5	9	5	19
Mountain	9	0	9	0	9	18	18	9	28	36
Pacific	0	0	7	7	0	0	0	0	4	0

PNEUMONIA DEATH RATES

	Aug 15, 1925	Aug 14, 1926	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926
95 cities	60	[2] 50	53	[3] 54	[4] 61	[2] 48	70	51	61	[6] 52
New England	29	31	38	40	41	33	53	50	50	40
Middle Atlantic	73	62	65	58	65	56	84	59	68	[7] 67
East North Central	47	[2] 35	40	[2] 34	50	[2] 38	59	34	46	37
West North Central	43	25	30	49	54	42	32	36	36	30
South Atlantic	73	56	60	86	[4] 80	58	54	64	60	[4] 42
East South Central	58	52	74	36	63	47	131	52	142	42
West South Central	82	113	77	71	106	76	73	52	82	104
Mountain	55	82	65	82	74	73	83	64	37	64
Pacific	80	39	47	78	62	21	95	78	91	57

[2] Madison, Wis , not included
[3] Madison, Wis , and Fort Smith, Ark , not included
[4] Greenville, S. C., not included
[5] Spokane, Wash , not included.
[6] Newark, N. J , and Greenville, S. C., not included
[7] Newark, N. J , not included
[8] Fort Smith, Ark , not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,451,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

BOLIVIA

Influenza—July, 1926.—Influenza was reported extensively diffused in Bolivia during the month of July, 1926. At La Paz schools were closed from July 15 to 25. Hospital records showed 19 deaths from influenza during the month.

BRAZIL

Smallpox—Rio de Janeiro—January 1–August 14, 1926—During the period January 1 to August 14, 1926, 1,908 cases of smallpox with 945 deaths were reported. Population, 1,543,212.

CANADA

Communicable diseases—Two weeks ended September 11, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the weeks ended September 4 and September 11, 1926, as follows:

WEEK ENDED SEPTEMBER 4

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal fever				1		5		6
Influenza	9				2			11
Smallpox				5	2	11	1	19
Typhoid fever	1	7	13	18	12		4	55

WEEK ENDED SEPTEMBER 11

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal fever					3	6		9
Influenza	5							5
Poliomyelitis				4				4
Smallpox				7	4		2	13
Typhoid fever	2	10	38	18	5		4	77

CEYLON

Health conditions, year 1925.—Disease prevalence was reported in the Island of Ceylon during the year 1925 as follows: *Smallpox*—28 cases, three deaths, as compared with the preceding year with 49 cases, nine deaths; and with 1923 with 280 cases, 39 deaths. The 22 cases reported at Colombo during the year were all from vesssels calling at the port. In 1924 the number of cases from vessels was four. The absence of spread from the imported cases in 1925 was

attributed to efficient preventive measures on the part of port authorities. *Cholera*—Cases, 305, deaths, 186. A number of outbreaks were attributed to cholera carriers Comparison with previous years shows for 1924 only 17 cases with 14 deaths, and in 1923 no reported cases.

CHOSEN

Cholera—Shingishu—A report received from Seoul, Chosen, shows cholera present at Shingishu and in vicinity, September 13, 1926.

ECUADOR

Plague—Summary, January-June, 1926.—Information has been received under date of July 31, 1926, showing the prevalence of plague in Ecuador during the period January to June, inclusive, 1926, as follows:

Province	Cases	Deaths	Number of localities
Chimborazo	9	2	At four localities
Guayas	74	29	At Guayaquil
Leon	43	19	At two localities
Loja	176	75	In two cantons
Tungurahua	83	29	At Ambato, Huachi, and Picayhua

Rats taken—Found infected—In the Province of Chimborazo, 766 rats were reported taken at four localities, in the Province of Guayas, at Guayaquil, 124,453 rats, of which 697 were found infected; in the Province of Tungurahua, 1,542 rats were taken at three localities.

Plague—Guayaquil—August, 1926—During the month of August, 1926, seven cases of plague with one death were reported at Guayaquil, Ecuador.

Plague-infected rats.—During the period under report 21,155 rats were reported taken and 37 rats found infected.

GERMANY

Poliomyelitis (infantile paralysis)—Magdeburg—Nordhausen.—Under date of September 7, 1926, the occurrence of poliomyelitis (infantile paralysis) was reported in central Germany. At Nordhausen 17 cases were reported and at Magdeburg the disease was stated to be present.

GREAT BRITAIN

Further relative to plague—Liverpool[1]—Information received under date of September 8, 1926, relative to plague reported present at Liverpool with several cases and one death, September 6, 1926,

[1] Public Health Reports, Sept 17, 1926, p 2056

shows that the occurrence was in a father and son, a boy of 10 years, who died of the disease, and that the father was employed at the Liverpool South End Docks.

LATVIA

Communicable diseases—July, 1926.—During the month of July, 1926, communicable diseases were reported in the Republic of Latvia as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	2	Mumps	8
Diphtheria	31	Paratyphoid fever	6
Dysentery	20	Puerperal fever	2
Erysipelas	30	Scarlet fever	176
Leprosy	3	Trachoma	20
Malaria	1	Typhoid fever	61
Measles	52	Whooping cough	77

Population, estimated, 1,850,000

MADAGASCAR

Plague—June 16 to 30, 1926.—During the period June 16 to 30, 1926, 43 cases of plague with 31 deaths were reported in the island of Madagascar. The occurrence was distributed in five Provinces as follows: Antisirabi, cases, 4; Itasy, cases, 17; Majunga, cases, 10; Mananjary, 1 case; Tananarive, cases, 10. The urban occurrence was: Tamatave (port), 1 case; Tananarive (interior), 1 case. According to type the distribution was: Bubonic, 10 cases; pneumonic, 30; septicemic, 3.

MALTA

Communicable diseases—July, 1926.—Communicable diseases were reported in the island of Malta during the month of July, 1926, as follows:

Disease	Cases	Disease	Cases
Broncho-pneumonia	3	Pneumonia	5
Chicken pox	9	Scarlet fever	2
Diphtheria	7	Trachoma	46
Erysipelas	6	Tuberculosis	16
Malta fever	91	Typhoid fever	42
Measles	68	Whooping cough	3

PANAMA CANAL

Communicable diseases—July, 1926.—During the month of July, 1926, communicable diseases were reported in the Canal Zone, and at Colon and Panama, as follows:

Disease	Canal Zone		Colon		Panama		Infected in other localities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chicken pox					1				1	
Diphtheria	2				12				14	
Dysentery		1			1				1	1
Hookworm				1	33				33	1
Leprosy			1		1				2	
Malaria	220		15		6	1	41		282	1
Measles	1		1		10				12	
Meningitis				1						1
Pneumonia [1]				6		11				17
Poliomyelitis			1						1	
Tuberculosis [1]		1		9		15		2		27
Whooping cough			1	1	1				2	1

[1] Only deaths reported

PERU

Mortality from gastroenteritis—Lima—May and June, 1926.—During the months of May and June, 1926, 38 and 32 deaths, respectively, from gastroenteritis, were reported at Lima, Peru

Influenza—During the same months, 10 and 7 deaths, respectively, from influenza were reported at Lima The total number of deaths reported for the month of May was 365, for the month of June, 349. Population, estimated, 200,000.

SAMOA

Epidemic influenza—Apia—Under date of August 21, 1926, epidemic influenza in a mild but highly infectious form was reported present at Apia, Samoa, and vicinity. The infected area was stated to extend along the coast The estimated number of cases was 200. No mortality was reported.

Bacillary dysentery—Measles.—During the week ended July 31, 1926, two cases of bacillary dysentery were reported in the Government hospital; during the week ended August 21, 1926, 13 cases of measles were reported at a village in vicinity of Apia, with no other infected area noted

VENEZUELA

Proposed water-supply system—Maracaibo.—A report of the preliminary work on the aqueduct system at Maracaibo to July 15, 1926, has been received. It is estimated that the supply of water furnished will give each inhabitant 172 liters of water daily on a basis of 100,000 population. The source of the supply is the Rio Palmar, which is estimated to have a flow of 3,860 liters per second and to be sufficient to supply water for 19 cities of the size of Maracaibo. The water is stated to be of fine quality.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended October 1, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Year, 1925 Cases, 305, deaths, 186 Previous year Cases, 17, deaths, 14.
China				
Canton	June 1-30	38	14	
Tsingtao	Aug 8-14	3	2	
Chosen				
Shingishu	Sept 13	19		Including places in vicinity
India				July 18-24, 1926 Cases, 2,002, deaths, 1,268
Calcutta	Aug 8-14	17	17	
Rangoon	Aug 1-7	1	1	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Ecuador				Jan -June, 1926 Cases, 385; deaths, 154
Province—				
Chimborazo	Jan -June	9	2	Localities, 4. Rats taken, 766.
Guayas—				
Guayaquil	do	74	29	Rats taken, 124,453, found infected, 697
Do	Aug 1-31	7	1	Rats taken, 21,155; found infected, 37
Leon	Jan -June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1,542
Great Britain				
Liverpool	Aug. 29-Sept. 4	2	1	Previously reported, corrected statement
Greece				
Patras	Aug. 8-14	1	1	
India				July 18-24, 1926 Cases, 234, deaths, 130.
Madras Presidency	July 25-31	58	31	
Rangoon	Aug 1-14	16	13	
Java				
Batavia	July 24-Aug. 6	3	3	Province
Madagascar				June 16-30, 1926 Cases, 43, deaths, 31
Province—				
Antsirabi	June 16-30	4	4	Bubonic, 1, pneumonic, 3.
Itasy	do	17	10	Bubonic, 2, pneumonic, 13, septicemic, 2 cases
Majunga	do	10	6	Bubonic, 3, pneumonic, 7 cases.
Mananjary	do	1	1	Bubonic.
Turkey				
Constantinople	Aug 15-28	2	1	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	Aug. 11-20	1		
Brazil:				
Bahia	Aug 1-14	27	9	
Para	do	4	3	
Pernambuco	July 18-31	4		
Rio de Janeiro	Aug. 1-14	529	256	Jan 1-Aug 14, 1926 Cases, 1908, deaths, 945
Canada.				
Alberta	Aug 29-Sept 11	3		
Calgary	Sept 5-11	1		
Manitoba	Aug 29-Sept 11	6		
Ontario	do	12		
Toronto	Sept 5-11	1		
Saskatchewan	Aug 29-Sept. 4	11		
Egypt:				
Alexandria	Aug 6-19	3	4	
India				July 18-24, 1926 Cases, 2,504 deaths, 849
Calcutta	Aug 8-14	2	1	
Karachi	Aug 15-21		1	
Madras	Aug 15-21	3	1	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended October 1, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Java				
Batavia	July 24-30	1		Province
Surabaya	July 18-24	15	1	
Portugal				
Lisbon	Aug 16-22		1	

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	Aug 1-10	1		
Chile				
Valparaiso	Aug 14-21	1		
Chosen				
Chemulpo	July 1-31	7	2	
Egypt				
Alexandria	Aug 13-19	1		
Port Said	Aug 13-19	1		
Mexico				
Mexico City	Aug 23-Sept 4	3		Including municipalities in Federal district
Palestine				
Halalal	Aug 17-23	1		
Haifa	do	2		
Yavniel	do	1		
Union of South Africa				
Cape Province	Aug 1-7			Outbreaks in two districts
Natal—				
Durban	July 25-Aug 7	9	1	One case imported
Transvaal	Aug 1-7			Outbreak in Potchefstroom district, on farm

Reports Received from June 26 to September 24, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926, Cases, 31; deaths, 29
China				
Nanking	July 25-Aug 7			Present.
Shanghai	Reported July 20	35	8	
Do	July 25-Aug 14	20	257	Cases, foreign, deaths, native and foreign
Swatow	July 11-Aug 7	20	63	
Tsingtao	do		1	
French settlements in India				Mar 7-June 26, 1926 Cases, 31; deaths, 30
India				Apr 25-June 26, 1926 Cases, 18,526, deaths, 11,531 June 27-July 17, 1926 Cases, 5, 123; deaths, 3,094
Bombay	May 30-June 5	1	1	
Do	July 18-31	2	2	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-Aug 7	215	189	
Madras	May 16-June 5	2	1	
Do	Aug 1-7	1	1	
Rangoon	May 9-June 26	67	44	
Do	June 27-July 31	27	26	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-July 24	28	17	
Japan				
Yokohama	Aug 25	1		
Philippine Islands				
Manila	May 18-24	2	2	
Do	June 27-July 31	5	2	
Provinces—				
Albay	Apr 18-24	1	1	
Mindoro	Feb 21-Mar 6	3	3	
Romblon	Dec 14-31	42	43	
Do	Jan 2-23	16	12	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 24, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
Siam				
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-July 31	69	26	
Straits Settlements				
Singapore	July 4-17	2	1	
On vessel				
Steamship Macedonia	Aug 5	1		At Yokohama, Japan Vessel sailed from Singapore, July 18, 1926

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported
Do	July 1-20	1		
Boni	Aug 14	1		
Azores				
Fayal Island—				
Horta	Aug 2-8	1	1	
St Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	
British East Africa				
Kisumu	May 16-22	1	1	
Uganda	Mar 1-May 31	449	356	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	
China				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug 7	28		
Foochow	June 6-July 31			Several cases Not epidemic
Nanking	May 9-Aug 7			Prevalent
Swatow	July 25-31	14		
Ecuador				
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1-31	5	2	Rats taken, 20,166, found infected, 22
Egypt				Jan. 1-Aug. 12, 1926. Cases, 115.
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 24	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
France				
Marseille	July 8	1	1	Reported July 24.
St Denis	Reported Aug 2	1		Vicinity of Paris.
St Ouen	Aug 14	2		Suburb of Paris.
Great Britain				
Liverpool	Reported Sept 6		1	Several cases.
Greece				
Athens	Apr 1-May 31	16	4	Including Piraeus.
Patras	May 27-June 12	4	1	
Do	July 25-Aug 7	5	2	
Zante	May 17	1		
Hawaii				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Paauhau	July 18-24			Plague-infected rat trapped
India				Apr 25-June 16, 1926 Cases, 53,001, deaths, 41,576 June 27-July 17, 1926 Cases, 547; deaths, 357.
Bombay	May 2-June 26	16	15	
Do	July 18-31	2	2	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 24, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
India—Continued				
Madras Presidency	Apr 25–June 26	162	93	
Do	July 4–24	80	33	
Rangoon	May 9–June 26	20	15	
Do	June 27–July 31	20	15	
Indo-China				
Saigon	May 23–June 26	8	3	
Do	July 18–24	1	1	
Iraq				
Baghdad	Apr 18–June 12	161	108	
Do	July 18–31	2	2	
Japan				
Yokohama	July 2–30	9	5	
Do	Aug 7	2		Total July 2–Aug 10, 1926 Cases, 9, deaths, 8
Java				
Batavia	Apr 24–June 19	65	65	
Do	June 26–July 23	27	26	
Cheribon	Apr 11–24	3	3	
East Java and Madoera	June 13–19	1	1	
Madagascar				
Ambositra Province	May 1–15	4	4	Septicemic
Moramanga Province	Apr 1–15	2	2	Do
Tananarive Province				Apr 1–June 30, 1926 Cases, 130, deaths, 120
Tamatave (Port)	May 16–31	1	1	
Tananarive Town	Apr 1–June 30	7	7	
Nigeria				Feb 1–Apr 30, 1926 Cases, 115, deaths, 92
Peru				May–June, 1926 Cases, 57, deaths, 15
Departments—				
Ancash	May 1–31			Present
Cajamarca	May 1–June 30	10	4	
Huacho	July 1–31	1		
Huaral	do	5	2	
Huarmey	do			Do
Ica	May 1–31	1		
Libertad	do	4		Pacasmayo, cases, 2, Trujillo district, cases, 2.
Lima	May 1–June 30	29	12	
Do	July 1–31	8	2	
Haciendas	do	7	3	
Piura	June 1–30	13		In Huancabamba district.
Russia				Jan 1–Mar 31, 1926 Cases, 37.
Senegal				Nov 1–30, 1926, Cases, 3, deaths, 2. Mar 1–Apr 30, 1926 Cases, 15; deaths, 4.
Siam				
Bangkok	May 23–June 26	2	2	
Do	July 18–24	1	1	
Straits Settlements				
Singapore	May 2–8	1	1	
Do	July 4–17	1	1	
Syria				
Beirut	July 1–Aug 10	2		
Tunisia	May 11–June 30	174		
Do	July 1–20	12		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Turkey				
Constantinople	Aug 1–14	2		
Union of South Africa				
Cape Province	May 16–22	5	3	
Calvinia District	June 13–26	12	6	
Do	June 27–July 3	1		
Williston District	June 13–26	2		
Do	June 27–July 3	1		
Orange Free State—				
Hoopstad District—				
Protestpan	May 9–22	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	May 21–June 30	14		
Do	July 1–10	1		
Belgium				
Antwerp	Aug 1–7	1	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 24, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-31	2	4	
Brazil				
Bahia	June 20-26	1		
Do	June 27-July 31	19	14	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-July 31	14	8	
Pernambuco	July 11-17	1		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-31	508	235	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Canada				May 30-June 12, 1926 Cases, 46
Alberta	May 30-June 12	3		
Do	June 27-Aug 28	2		
British Columbia—				
Vancouver	Aug 16-22	2		
Manitoba				May 30-June 26, 1926 Cases, 24 June 27-Aug 28, 1926 Cases, 13.
Winnipeg	June 6-12	5	1	
Do	July 4-Sept 4	12		
Ontario				May 30-June 26, 1926 Cases, 36. June 27-Aug 28 Cases, 58
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2	1	
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Toronto	do	7		
Waterloo	do	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16. June 27-Aug 28 Cases, 43
Regina	July 4-10	2		
Ceylon				Mar 14-May 29, 1926 Cases, 44, deaths, 3
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Chungking	May 2-Aug 7			Present
Foochow	do			Do
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway
Antung	May 16-June 19	5		
Changechun	May 16-June 26	6		Do
Do	June 27-July 3	1		Do
Dairen	Apr 26-June 20	69	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do
Harbin	May 14-June 30	21		Do
Do	July 1-28	12		
Kai-yuan	May 16-June 30	10		Do
Kungchuling	June 13-19	1		Do
Liao-yang	May 16-June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do
Ssupingkai	May 16-June 30	2		Do
Teshihchiao	do	2		Do
Wa-fang-tien	do	3		Do

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 24, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Nanking	May 8-Aug. 7			Present.
Shanghai	May 2-June 26	10	25	Cases, foreign, deaths, population of international concession, foreign and native
Do.	June 27-July 24	3	3	
Swatow	May 9-Aug 7			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-May 31, 1926 Cases, 548, deaths, 206
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do.	July 23-Aug 5	8	1	
Cairo	Jan 29-Mar 4	3	1	
Esthonia				May 1-June 30, 1926 Cases, 3
France				Mar 1-June 30, 1926 Cases, 141.
St Etienne	Apr 18-June 15	7	3	
French Settlements in India	Mar 7-June 26	282	282	
Gold Coast	Mar 1-May 31	662	13	
Great Britain				
England and Wales				May 23-July 3, 1926 Cases, 1,068, July 4-Aug 28, 1926: Cases, 662
Bradford	May 23-29	1		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-17	1		
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do.	July 4-Aug 7	2		
Greece				
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr. 25-June 26, 1926. Cases, 54,851, deaths, 14,771 June 27-July 17, 1926. Cases, 9,634, deaths, 2,923.
Bombay	May 2-June 26	220	134	
Do.	June 27-July 31	78	41	
Calcutta	Apr 4-May 29	171	152	
Do.	June 13-26	24	18	
Do.	June 27-Aug. 7	25	21	
Karachi	May 16-June 26	44	18	
Do.	June 27-Aug 14	13	6	
Madras	May 16-June 26	7	4	
Do.	June 27-Aug. 14	26	7	
Rangoon	May 9-June 26	10	5	
Do.	July 4-24	3		
Indo-China				
Saigon	do	2		
Iraq				
Baghdad	May 9-June 26	8	3	
Do.	July 4-10	1	1	
Basra	Apr 18-June 22	34	25	
Italy				Mar 28-June 26, 1926 Cases, 34
Catania	Aug 9-15	2		
Rome	June 14-20	4		Entire consular district, including Island of Sardinia
Jamaica				Apr 25-June 26, 1926: Cases, 201. (Reported as alastrim)
Do.				June 27-Aug 28, 1926 Cases 95 (Reported as alastrim)
Japan				Apr 11-June 19, 1926 Cases, 641.
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Do.	July 4-10	1		
Taiwan Island	May 11-20	24		
Do.	June 1-20	23		
Do.	July 11-Aug 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-June 25	2		Province
East Java and Madoera	Apr 11-July 3	100	6	
Do.	July 4-17	28		
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 24, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Latvia				Apr 1–June 30, 1926 Cases, 5
Mexico				Feb 1–Apr 30, 1926 Deaths, 982.
Aguascalientes	June 13–26		5	
Guadalajara	June 8–14		2	
Do	June 29–Aug 30		6	
Mexico City	May 16–June 5	3		Including municipalities in Federal District
Do	July 25–Aug 28	4		Do
Saltillo	July 18–24		1	
San Antonio de Arenales	Jan 1–June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13–26		7	
Do	July 4–Sept 4		10	
Tampico	June 1–10		2	
Torreon	May 1–June 30		17	
Do	July 1–Aug 31		9	
Netherlands				
Amsterdam	July 18–24		9	
Nigeria				Feb 1–Apr 30, 1926 Cases, 404; deaths, 33.
Persia				
Teheran	Apr 21–May 21		7	
Peru				
Arequipa	June 1–30		1	
Poland				Mar 28–May, 1926 Cases, 12; deaths, 1. June 27–July 24, 1926 Cases, 2, deaths, 1.
Portugal.				
Lisbon	Apr 26–June 19	10	3	
Do	July 11–Aug 13	20	5	
Oporto	May 23–June 5	4		
Do	July 11–24	2		
Russia				Jan 1–Mar. 31, 1926 Cases, 2,103.
Siam.				
Bangkok	May 2–June 12	23	20	
Do	July 4–31	39	35	
Spain				
Valencia	Aug 22–28	1		
Straits Settlements				
Singapore	Apr 25–May 1	1		
Do	July 11–17	1		
Switzerland				
Lucerne Canton	June 1–30	1		
Do	July 1–31	2		
Tripolitania	Apr 1–30	11		
Tunisia				Apr. 1–June 30, 1926 Cases, 17.
Tunis	Aug 11–20	2		
Union of South Africa	June 1–30	8	1	
Cape Province	June 20–26			Outbreaks
Idutya district	May 23–29			Do
Orange Free State	June 20–July 3			Do
Natal	May 30–June 5			Do
Transvaal				June 6–12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Johannesburg	May 9–June 12	5		
Do	July 11–17	1		
Yugoslavia				Apr 15–30, 1926 Cases, 2, deaths, 1.
On vessel				
S. S. Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed At Durban, Union of South Africa, June 16, 1926 One suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 24, 1926—Continued

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Argentina				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Bulgaria				Mar 1-June 30, 1926 Cases, 87, deaths, 14
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Valparaiso	Apr 29-May 5		1	
China				
Antung	June 14-27	7	1	
Do	June 28-Aug 15	24	1	
Canton	May 1-31	1		
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1-May 31, 1926 Cases, 887, deaths, 91
Chemulpo	May 1-June 30	38	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Do	July 1-31	7		
Czechoslovakia				Jan 1-June 30, 1926 Cases, 156, deaths, 5
Egypt				
Alexandria	July 16-Aug 5	2		
Port Said	June 4-24	4	1	
Do	July 9-15	3	1	
Cairo	Jan 29-Mar 4	74	17	
Do	July 23-Aug 5	1		
Great Britain				
Scotland—				
Glasgow	July 30-Aug 21	9	1	
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerr County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-May 8, 1926 Cases, 3
Japan				Mar 28-May 29, 1926 Cases, 37.
Latvia				May 1-June 30, 1926 Cases, 19
Lithuania				Mar 1-June 30, 1926 Cases, 199, deaths, 22
Mexico				Feb 1-Apr 30, 1926 Deaths, 110
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal District.
Do	June 13-19	9		Do
Do	July 25-31	3		Do
Do	Aug 15-28	12		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-June 30, 1926 Cases, 426
Palestine				Mar 1-June 30, 1926. Cases, 14, deaths, 1 Aug 10-16, 1926 Cases, 2
Gaza	July 6-12	1		
Haifa	July 13-19	1		
Jaffa District	June 15-28	5		
Majdal District	July 13-Aug 2	2		
Nazareth District	do	3		
Tiberias	Aug 3-9	1		
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85 June 27-July 24, 1926 Cases, 147, deaths, 11.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to September 21, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Rumania				Mar 1-May 31, 1926 Cases, 711, deaths, 69
Russia				Jan 1-Mar 31, 1926 Cases, 14,814
Tunisia				Apr 1-June 30, 1926 Cases, 110.
Tunis	June 11-30	3		
Turkey				
Constantinople	June 16-22	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths, 19
Cape Province				Apr 1-May 31, 1926 Cases, 116; deaths, 15
Do	May 31-June 30	49	5	
Glengray District	June 27-July 3			Outbreaks
Grahamstown	do	1		Sporadic
Natal				Apr 1-June 30, 1926 Cases, 28 July 25-31, 1926, Cases, 11 In native compounds
Orange Free State				Apr 1-June 30, 1926 Cases, 24; deaths, 4
Do	July 18-24			Outbreaks
Transvaal				Apr 1-June 30, 1926 Cases, 10, deaths, 5
Walkkerstroom District	June 20-26			Outbreaks
Wolmaransstad District	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 48, deaths, 7 July 1-31, 1926 Cases, 2, deaths, 1
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr 1-May 31	6	3	

TREASURY DEPARTMENT

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Investigation of an Epidemic of Glandular Fever
Notifiable Disease Reports of a Typical Small City
Reports of the Health Section, League of Nations

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HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C. C. PIERCE, *Chief of Division*

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PUBLIC HEALTH REPORTS

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REPORT OF AN EPIDEMIC OF GLANDULAR FEVER (INFECTIOUS MONONUCLEOSIS)

By R R SPENCER, Surgeon, United States Public Health Service

On July 27, 1926, Dr C T Smith, of Rocky Mount, N C., reported the occurrence of about 30 cases of a disease characterized by high continuous fever, enlargement of the spleen and lymph glands, and a macular rash appearing over the chest, abdomen, and extremities about the third or fourth day of fever Widal tests were invariably negative and the condition did not respond to quinine administration.

The writer arrived in Rocky Mount, a city of about 16,000 population, on July 28, 1926, and was able to see many of these cases, the majority of which, however, were then in the convalescent stage. The outbreak had begun, as far as could be ascertained, about the first week in July, the largest number of cases occurring from July 10 to 20 It is probable that sporadic cases had occurred before. One physician reported that his 11-year old daughter had a similar infection with enlarged lymph glands a year previously.

SYMPTOMATOLOGY

The typical cases were characterized by a few days of general malaise, followed by one or more chills and fever, a general aching all over the body especially severe in the eye muscles and occipital region Nausea and vomiting and a slight sore throat occurred in about half the cases seen. The fever was usually high at first and gradually tapered off to normal, with an average duration of 7 to 10 days. In one typical case (No. 8) the temperature on the 29th day was 101° F in the afternoon Enlarged tender lymph glands developed in 14 of the 26 cases tabulated below. In some instances the enlarged glands did not develop or were not recognized until late in the illness. Suppuration of the glands did not occur An unusual feature of the condition was the appearance of a faint but definite rose-colored macular rash over the chest, abdomen, and flexor surfaces of the arms in 13 of the 26 cases. In one case (No. 21) the rash was definitely maculo-papular and covered the entire body except the face This case did not show enlarged glands and the patient's blood on the 15th day after onset did not agglutinate *B. tularense* or *B. proteus* X_{19} As a rule, convalescence was prolonged, the patients remaining weak for days. There were no fatalities.

TABLE 1

Case	Age	Sex	Occupation	Date of onset	Severe headache	Sore throat	Nausea or vomiting	Severe muscular pains	Rash	Enlarged and tender glands	Enlarged spleen	Widal test	White blood count	Remarks
1	46	M	Tinner	July 15	+	+	0	0	+	Posterior cervical epitrochlear.	+	−	6,200	Blood culture negative Guinea pigs injected 14th day of fever were negative
2	12	F	Schoolgirl	July 8	+	0	+	+	−		+	−	0	
3	58	F	Housewife	do	+	0	+	−	0		+	−	0	
4	14	F	Schoolgirl	do	−	−	+	+	+		+	−	0	
5	33	M	Insurance agent	July 15	+	+	−	+	+	Posterior cervical	+	−	0	
6	30	M	Battery worker	July 21	+	−	+	−	+		+	−	0	
7	3	M	Baby	July 15	−	−	−	−	+		−	−	7,000	
8	32	M	Furniture dealer	July 7	+	+	−	+	−	Posterior cervical, posterior auricular.	+	−	7,000	46 8% small lymphocytes.
9	12	F	Schoolgirl	July 13	+	−	+	−	+		+	−	0	Case 7 miles north of city.
10	13	M	Schoolboy	July 15	+	+	−	+	+		+	0	0	Case 2 miles north of city.
11	38	M	Policeman	July 13	+	+	−	−	−	Posterior cervical	0	−	0	
12	45	M	Jeweler	July 11	+	−	+	−	+	do	+	−	0	
13	15	M	Schoolboy	July 10	−	+	−	+	+	Posterior auricular	+	0	0	
14	33	M	Foreman car shop.	July 12	+	+	−	+	+	do	+	0	0	
15	21	F	House girl	July 22	+	−	+	−	−		+	0	0	
16	17	F	Schoolgirl	July 15	−	−	+	+	−	Posterior cervical; suboccipital	−	−	0	
17	19	M	Schoolboy	July 10	+	−	+	−	−	Posterior cervical	−	0	0	84 6% small lymphocytes
18	31	F	Cashier	July 12	+	+	+	+	−	do	−	−	0	
19	28	M	Auto salesman	July 27	+	+	−	−	−		−	0	0	Guinea pigs injected with blood on 3d day of fever were negative
20	34	M	Railroad engineer	June 29	+	+	−	+	−		−	−	0	
21	21	M	Pipe fitter	July 20	+	+	−	+	+		−	−	0	Rash maculo-papular in character.
22	19	M	Schoolboy	July 11	+	−	−	+	−	Posterior auricular	−	−	0	
23	33	M	Car repairman	July 18	+	−	−	+	+	Posterior cervical; posterior auricular	−	−	0	
24	30	M	Policeman	July 15	+	−	−	−	−		−	−	0	
25	43	M	Jeweler	July 12	+	+	+	+	−	Posterior auricular	−	0	0	70% small lymphocytes
26	49	F	Housewife	July 5	+	+	+	+	+	Posterior cervical	−	−	6,400	

+=Presence of symptoms or positive laboratory findings, −=absence of symptoms or negative laboratory findings, 0=symptoms not determined or laboratory test not performed

TABLE 2.—*Agglutination test*

Case	Day of disease on which blood was taken	Agglutination for *B. tularense*	Agglutination for *B. proteus X19*	Remarks
1	14	----------	----------	Case No. 1 in Table 1
2	29	----------	----------	Case No. 8 in Table 1
3	3	----------	----------	Case No. 19 in Table 1
4	15	----------	----------	Case No. 21 in Table 1
5	26	----------	----------	Case No. 25 in Table 1
6	11	----------	----------	Cases not included in Table 1.
7	8	----------	----------	
8	24	----------	----------	
9	15	----------	----------	

TABLE 3.—*Differential blood count, in percentages, of eight cases*

Polymorphonuclear neutrophiles	49.1	13.2	20.0	17.5	40.1	31.3	50.7	43.4
Large lymphocytes	3.2	2.1	7.3	5.1	9.1	4.2	3.3	4.4
Small lymphocytes	*46.8*	*84.6*	*70.8*	*76.2*	*47.1*	*61.4*	*43.8*	*52.2*
Large mononuclears	0	0	2.2	1.4	3.8	4.1	2.2	0
Transitionals	0	0	0	0	0	0	0	0
Polymorphonuclear eosinophiles	1.3	0.3	0	0	0	0	0	0
Polymorphonuclear basophiles	0	0	0	0	0	0	0	0

AGE AND SEX DISTRIBUTION

Although the cases tabulated in Table 1 show a preponderance of males (18 males, 8 females), the sexes were about equally represented in the total number of cases recorded. In the cases shown in Table 1 age distribution varied from 3 years to 58 years. Thirty-two cases not tabulated, however, were all in young adults from 15 to 28 years of age.

ANIMAL INOCULATION

Guinea pigs were injected with citrated blood from cases No. 1 and No. 19 (Table 1) taken on the fourteenth and third day of fever, respectively. These animals showed no elevation of temperature and remained normal for 18 days.

EPIDEMIOLOGICAL DATA

Since the etiology and mode of spread of this condition were unknown, an investigation was made along the following lines:

City water supply.—An inspection of the city filtration plant showed that the daily consumption at this time of year is about 2,000,000 gallons. This amount does not tax the capacity of the plant. The water taken from the Tar River is first treated with 500 pounds of alum and 25 pounds of soda per day and permitted to settle in a baffled reservoir of 250,000 gallons capacity. It is then passed through six rapid sand pressure filters. These filters are washed every twelve hours by reverse flow. The clear water is then treated with 3½ pounds of chlorine gas (Wallace and Tiernan apparatus) per million gallons. A bacteriological count is made

daily at the city health department. The records show that the water rarely has had a total count in excess of 100 organisms per c. c. and that *B. coli* has been invariably absent in 10 c. c amounts for the preceding two or three months. Under such conditions the water supply could not reasonably be held responsible for the epidemic.

In addition, two of the cases seen occurred at homes out of the city, each having its own source of water Other cases were also reported from adjacent country

Milk supply—Among 30 typical cases, 12 stated they drank no milk, 7 had milk from their own or neighbor's cows, 5 obtained milk from C's dairy, 3 from the L R. dairy, 2 from G's dairy, and 1 from M. B dairy. It is therefore safe to conclude that no one source of milk could have been responsible for the outbreak. There was no indication that other dairy products such as cheese, butter, or buttermilk were involved

Ice cream.—Practically all the ice cream sold to the public in Rocky Mount is furnished by one company. The ice-cream mixture for the local plant of that company is prepared at Wilson, N. C. The Wilson plant was inspected on August 7 The ice-cream mixture is pasteurized by means of steam coils at a temperature of 160° F. This temperature is held for 30 minutes, after which it is quickly cooled to about 35° F. It is then shipped by motor truck to Rocky Mount in milk cans which have been sterilized by a steam jet. It is then immediately frozen. Ice cream from the Wilson plant is also sold in localities where no cases have been reported. Several of the patients, upon being questioned, claimed never to have eaten ice cream.

Insects as possible vectors.—Because of the evidence of enlarged post cervical, post auricular, and suboccipital lymph glands, head lice were looked for especially. None were found.

A careful survey about homes as well as in the business district revealed no larvae of *Aedes aegypti,* although ideal breeding places for such mosquitoes were numerous. A few culicene mosquitoes were found.

Contagion.—The cases reported by the physicians were scattered and no definite relationship or contact appeared to exist between them. However, a house-to-house survey in a selected area of the residential section and another in the business district uncovered a number of cases that suggested a spread of the condition from one person to another. A history was also obtained of many mild and abortive attacks which would far exceed the actual number of cases seen and reported. In one family of four, the three children came down within a week, the mother escaping. The oldest boy, aged 20, who worked in a confectionery store, was taken first. In the same store, employ-

ing 8 people, 4 boys and 2 girls, ranging in age from 16 to 20, were stricken within two days. The two older employees escaped. In four of these cases enlarged glands in the post cervical and sub-occipital regions were still palpable and visible after the patients had returned to work.

In another firm of eight employees, four, all under 24 years, were taken sick from July 10 to 20. Another developed tender glands in the neck but did not feel ill enough to stop work.

In still other firms a history of two or more cases were obtained. Other firms employing from 5 to 20 workers remained free of the infection. There were many reports of indefinite illness with fever and headache or slight sore throat for one or two days among those associated with cases. Such cases as these, it is believed, were responsible for the rapid spread of the disease and for those cases where direct contact was obscure.

The residential area surveyed contained 31 homes and a total of 173 people. Four cases from this area had already been reported by physicians The survey revealed a total of 15 cases, or an attack rate of 8 6 per cent

In the business district, among 23 firms visited, having a total personnel of 272, there were 33 cases (attack rate of 12 1 per cent)

Sixteen of these patients, all of which were seen shortly after recovery, either had enlarged palpable cervical glands at the time or distinctly recalled their presence during the illness. Others had intense soreness in the neck, especially on movement, but did not remember any definite enlargement of the glands

In 11 firms, with a total of 56 employees, no case histories were elicited. The 12 firms in which cases occurred are enumerated below, showing the relationship between the number of employees and the number of cases:

Nature of firm	Number of employees	Number of cases	Nature of firm	Number of employees	Number of cases
Laundry	40	1	Dry goods	8	5
Jewelry store	5	3	Do	6	2
Department store	25	2	Furniture store	9	2
Do	6	1	Do	3	1
Do	24	3	Confectionery store	8	6
Do	20	4	Dry cleaning	15	3

DISCUSSION

The possibility that the epidemic was one of dengue fever was considered But the absence of the intermediate host, the protracted fever in many cases, and the slow convalescence seems to preclude a diagnosis of this malady.

The rash at first suggested Brill's disease, but the enlarged glands, the history of so many mild and abortive cases, the nagtive animal inoculation, the negative agglutination of *B. proteus* X_{19} in nine cases, and the blood picture seemed to rule it out completely.

Tularaemia was likewise discarded on agglutination tests and in the absence of suppurative glands.

The epidemiology, symptomatology, and laboratory finding fit in best with glandular fever, first described by Pfeiffer [1] as "Drusenfeber," and by Sprunt and Evans [2] as "Infectious mononucleosis." The frequent occurrence of a rash was the most unusual feature in our cases; and Longcope [3] reported ten cases, two of which had a macular rash over the chest and abdomen resembling rose spots. Tidy and Diniels [4] state definitely that eruptions did not occur in their cases. These authors also called attention to the persistence of enlarged palpable glands in the neck several weeks after convalescence as observed in some of our cases

Other outbreaks of glandular fever have been reported from New York, New Jersey, and Wisconsin,[5] and it is believed the condition has a wider distribution than is commonly recognized.

THE REPORTING OF NOTIFIABLE DISEASES IN A TYPICAL SMALL CITY [6]

Hagerstown Morbidity Studies No. II

By Edgar Sydenstricker, Statistician, United States Public Health Service

The completeness with which cases of diseases notifiable by law are actually reported depends upon several specific conditions and is subject to the influence of more or less intangible factors The laws requiring notification are usually quite definite and frequently demand much more than is expected or even possible. For example, in some States the disease notification laws make it the duty, not only of physicians, but also of school-teachers, administrators of institutions, and citizens generally, to report promptly all cases of a long list of diseases But what actually occurs in most instances has narrowed down to the notification of only a few of these diseases by physicians who are in attendance upon cases, largely because

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[1] Pfeiffer, E Jahrb f Kinderh, 1889, v 24 257.

[2] Sprunt and Evans Johns Hopkins Hosp Bull, 1920, v 31 410

[3] Longcope, W T Am J Med Sci, 1922, v 164 781

[4] Tidy and Daniels Lancet, v 205 9-13

[5] Gilbert and Coleman Am J Hyg, 1925, v 5 35

Carlson, Brooks, and Marshall Wisconsin Med. J, 1926, v 25 176

Guthrie and Pessel. Am J Dis Child, 1925 v 29 192

[6] From the Office of Statistical Investigations, U S Public Health Service

A Study of Illness in a General Population Group Hagerstown Morbidity Studies No I Method of Study and General Results, was published in the Public Health Reports, Vol 41, No 39, Sept 24, 1926, pp. 2069-2088.

dependable diagnoses are sought So that the practical situation seems to resolve itself into those factors which affect the following conditions:

1. The extent to which physicians are available in a given population for attendance upon cases of notifiable diseases;
2. The extent to which the physicians in this population are called in to attend these cases; and
3. The extent to which the physicians actually report the cases they see and diagnose.

In the belief that a small contribution might be made to our knowledge of these conditions, the records obtained in a series of morbidity observations upon a general (white) population group during 28 months in Hagerstown, Md , were analyzed from the points of view set forth above, and the results are given briefly in the tables and comments which follow.

The city of Hagerstown had, at the time when the morbidity study was made, a population of about 30,000 (29,878 estimated as of February 1, 1923, the mid-date of the period covered by the study). There were 45 physicians (medical graduates), of whom 37 were engaged in general practice. This gives a ratio of one physician to 666 persons, a proportion not greatly in excess of the average for cities in the United States[7] It was found that 30 of the 37 physicians in general practice were actually practicing among the families regularly observed for the incidence of illness. If all the cases of notifiable diseases estimated to have occurred in Hagerstown had been distributed among the 37 physicians engaged in general practice, the average number which each physician would have had to report upon would have been 7 or 8 new cases per month; in the season of heaviest prevalence each physician would have had possibly one new case per day. Unless it be assumed that their practice would have been materially increased along other lines, it appears safe to assume that a sufficient number of physicians were available for attendance and reporting upon the cases of notifiable diseases which occurred in the city during the period under consideration.

The record of illness was made by trained workers visiting about 1,800 families at intervals of less than two months from December 1, 1921, to April 1, 1924.[8] The population thus observed constituted about one-fourth of the total population of the city, and the selection of families was so made as to include all sections and classes. Since excellent cooperation was given by the families visited, and the field assistants became well acquainted with the individuals and their

[7] In 1921 there was one physician to 541 persons in cities and towns having a population of 5,000 or more, according to a statement in the American Medical Association Bulletin for December, 1923 (18 465)

[8] The method of this study has been described in the first report of this series.

disease histories, it is believed that a fairly accurate record was obtained of the diseases with which we are particularly concerned here.[9] All cases seen by physicians were referred to the physicians for review as to diagnosis.

TABLE 1.—*Attendance of physicians upon cases of certain notifiable diseases observed in a general population group in Hagerstown, Md., December 1, 1921–March 31, 1924*

Disease	Number of cases observed	Per cent attended by physician
Typhoid fever	19	100.0
Meningitis	1	100.0
Pneumonia (all forms)	144	97.9
Diphtheria	45	97.8
Scarlet fever	34	97.1
Influenza	261	91.1
Measles	568	64.1
Scabies and impetigo	49	61.2
Whooping cough	374	48.8
Chicken pox	232	45.2
German measles	18	38.9
Mumps	9	33.3

The number of cases of the principal notifiable diseases which were recorded as having occurred in the population under observation for the 28-month period, and the proportion attended by physicians are shown in Table 1. The number of cases of certain diseases is too small to indicate the situation even in the population observed, but it is clearly evident that two general groups of communicable diseases may be distinguished from the point of view of medical attendance in a community which was fairly well supplied with physicians. In one group are scarlet fever, typhoid fever, pneumonia, diphtheria, and influenza,[10] over 90 per cent of the cases of each of these diseases having had medical attendance. In the second group are measles, scabies and impetigo, whooping cough, chicken pox, and probably mumps, although in the last instance the number of cases was too small to warrant any conclusion.

In so far as this experience may be regarded as at all typical, it can be interpreted that nine-tenths or more of the cases of the more serious diseases upon which public attention has been focussed come under the observation of those upon whom the health department depends for its reports. On the other hand, it is also clearly shown

[9] At the same time records of illness and disease incidence were obtained from families, a record was kept by teachers in schools of all absences due to sickness. The teachers ascertained the causes of sickness so far as it was possible to do so, and their records of disease incidence were subsequently compared with the records obtained from the families observed, with the result that a very close correspondence in nearly all diseases was found, particularly for the acute infectious diseases with which we are concerned in this communication.

[10] The classification of cases under "influenza" that were not seen by physicians was based on the informant's statements. The epidemiological evidence, which will be discussed in another report, pointed very definitely to the probability that these cases were influenza as it is commonly diagnosed, as well as against the probability that many cases actually accompanied by illness were overlooked.

that a considerably smaller proportion of cases of such common diseases as measles, impetigo, whooping cough, and chicken pox ever come to the attention of the physicians, much less to the attention of the health department itself.

The question then naturally arises, What proportion of the cases actually seen by physicians are reported? Obviously, so many factors are involved that it is hardly fair to take a single example as typical. This particular experience is not without interest, however, because a health demonstration was in progress at the time when the observations were made. The local physicians were cooperating almost unanimously with this demonstration, considerable public interest was aroused, and the conditions favorable to complete reporting were unusually good.

We did not check each individual case recorded in the observed. population group and seen by a physician with the reports sent in to the health demonstration office, and therefore we are unable to give an exact statement of what actually transpired, but it can be approximated with a fair degree of accuracy for the more frequently occurring diseases by the following method: Assuming that the observed population group was a fair sample of the entire population of Hagerstown, the total number of cases of a given disease seen by physicians can be estimated for the entire population. This estimated total may then be compared with the number of cases actually reported to the local health officer as having occurred during the same period.

TABLE 2.—*Extent to which certain notifiable diseases seen by physicians were reported by them to the local health officer in Hagerstown, Md., December 1, 1921–March 31, 1924*

Diseases	Number of cases estimated from study of sample population as seen by physicians in entire city [2]	Number of cases reported to local health officer [1]	Per cent of cases seen by physicians that were reported
Pneumonia (all forms)	595	339	57.0
Diphtheria	186	165	88.7
Scarlet fever	139	142	102.0
Influenza	996	863	86.6
Measles	1,557	627	40.3
Scabies and impetigo	127	1	0.8
Whooping cough	751	229	30.5
Chicken pox	439	151	34.4

[1] As furnished by the bureau of communicable diseases, Maryland State department of health.
[2] The number of cases represented in the first figure column of Table 1 has been multiplied by the ratio of the number of persons observed to the total population to obtain these estimates.

The results of this comparison as given in Table 2 are doubtless about what those who are familiar with the situation of disease reporting would expect. Measles, whooping cough, and chicken pox are very incompletely reported. Scabies and impetigo are an

illustration of diseases notifiable under laws which little or no attempt is made to enforce. In fact, practically all of the cases of scabies and impetigo were first seen by teachers among school children and the children were sent home with the recommendation that a physician be consulted. The total number of cases actually recorded in the families under observation undoubtedly is a minimal statement; a considerable number of cases of children with "sores" were also reported by family informants. On the other hand, the response of physicians to the demand for reports of scarlet fever and diphtheria (and typhoid and smallpox may be safely included) is evidence of their desire, as well as the general desire, for the administration of control measures. The relatively high proportion of influenza cases (as well as of pneumonia) which were reported may be regarded as a reflection of the general interest in this disease which manifested itself in epidemic form in Hagerstown in the late winter and early spring of 1923.

TABLE 3.—*A comparison of the incidence rates for certain notifiable diseases in Hagerstown, Md., based on morbidity surveys with those based on reports by physicians to the local health department, December 1, 1921–March 31, 1924*

Disease	Annual rate per 1,000	
	Based on records from regular house-to-house visits to homes of one-fourth of the total population	Based on reports of physicians to the local health department
Typhoid fever	1.15	0.96
Meningitis	.06	.03
Pneumonia (all forms)	8.72	4.86
Diphtheria	2.72	2.37
Scarlet fever	2.06	2.04
Influenza	15.80	12.38
Measles	34.39	8.99
Scabies and impetigo	2.97	.01
Whooping cough	22.64	3.28
Chicken pox	14.05	2.17
German measles	1.09	.06
Mumps	.54	.34

We may now summarize this item of experience in the reporting of notifiable diseases from the point of view of the value of a rate of incidence based upon cases *as reported*. A comparison is given in Table 3 of the rate of incidence computed upon cases recorded in a continuous canvass of a considerable population with a rate based upon cases reported by physicians. There is a great variation in the diseases. For scarlet fever, typhoid fever, diphtheria, and influenza, the rate based on reported cases approximates the actual rate fairly well, and this undoubtedly would have been true of other serious but relatively rare diseases. But the rates based on the reports for the

other more common notifiable diseases do not begin to approximate the actual rates for these diseases, in spite of the existence of conditions favorable to cooperation between the practicing physicians and the local health demonstration and of the probability that the "actual rate" is a minimal statement of the incidence of the diseases in question.

SUMMARY

In the course of a 28-month study of illnesses in a general population group in Hagerstown, Md , data were collected relating to medical attendance. These records were considered from the points of view that led to the following conclusions:

1 The number of physicians engaged in general practice was sufficient to provide for medical attendance upon all cases of notifiables diseases in this community

2 Physicians were actually called in to attend 90 per cent or more of the cases of the more serious notifiable diseases which were observed including typhoid fever, the pneumonias, diphtheria, scarlet fever, and epidemic influenza, but less than 65 per cent of cases of measles, scabies and impetigo, whooping cough, and chicken pox were attended by physicians.

3 Of cases seen by physicians, apparently 85 per cent or more of the cases of diphtheria, scarlet fever, and influenza were reported; about 60 per cent of the pneumonias and 30 to 40 per cent of measles, whooping cough, and chicken pox. Practically no scabies nor impetigo was reported. Conditions were unusually favorable for complete reporting.

4 Incidence rates based on the physicians' reports approximated fairly well the rates based on regularly repeated house-to-house inquiries for scarlet fever, typhoid fever, diphtheria, epidemic influenza, and probably other serious but rarer diseases. The incidence rates based on physicians' reports for the other more common notifiable diseases, however, fell far short of their incidence as actually observed.

ACKNOWLEDGMENTS

The continuous field observations were made by the following assistants: F. Ruth Phillips, Mrs. Mary King Phillips, Louise Simmons, Mrs. Clara Bell Ledford, Clarice Buhrman, and Mrs. Alcesta Owen, under the immediate supervision of Passed Asst Surg. R B. Norment, jr., Acting Asst. Surg A. S. Gray, and, later, of Surg. C. V. Akin. I am indebted especially to Assistant Statistician Dorothy G. Wiehl for help in tabulations and for suggestions, and to Dr R H. Riley, of the Maryland State department of health, for a summarization of the reports of diseases notified in Hagerstown during the period concerned.

CURRENT WORLD PREVALENCE OF DISEASE

REVIEW OF THE MONTHLY EPIDEMIOLOGICAL REPORT ISSUED AUGUST 15, 1926, BY THE HEALTH SECTION OF THE LEAGUE OF NATIONS' SECRETARIAT[1]

Cholera diminished rapidly during July in all the principal ports of the Far East except in Shanghai, where a sudden outbreak began the middle of the month and 314 cases were reported in the one week, July 25–31, according to information contained in the August Epidemiological Report published at Geneva by the health section of the League of Nations' secretariat The weekly cases (or deaths) reported at the various ports are given in Table 1.

TABLE 1.—*Cholera prevalence reported in the principal ports of the Far East from June 26 to July 31, 1926*

City	Week ended—					
	June 26	July 3	July 10	July 17	July 24	July 31
Bombay (deaths)	0	0	0	0	1	1
Calcutta (deaths)	41	45	0	0	0	0
Negapatam (deaths)	23	7	3	2	1	0
Vizagapatam (deaths)	0	0	0	0	1	0
Rangoon (deaths)	12	6	11	7	1	1
Singapore (cases)	0	0	1	0	0	0
Bangkok (cases)	56	36	18	20	10	5
Saigon and Cholon (cases)	5	32	8	3	0	0
Haiphong (cases)	42	17	19	3	0	0
Shanghai (cases)	0	0	0	37	29	314

The outbreak of cholera in Kwang-Chow-Wan in June, with 70 cases between June 11 and 30, seems not to have spread, as no cases were reported in the first 20 days of July. In French Indo-China a slight decline is noted in July, when 1,528 cases of cholera were reported in the first 20 days as compared with 1,786 cases in the preceding 20 days

Plague.—The prevalence of plague in Africa in the first half of 1926 is shown in Table 2.

TABLE 2—*Plague cases reported in Africa during 1926*

Month	Kenya	Nigeria	Senegal	Tunisia	Madagascar	Union of South Africa	4-week periods ended—	Uganda[a]	Egypt[a]
January	49	24	0	0	334	0	Jan 30	93	0
February	97	25	0	0	277	1	Feb 27	52	1
March	81	56	3	0	186	26	Mar 27	26	7
April	37	34	12	0	101	10	Apr 24	78	10
May	40		129	70	25	13	May 22	213	25
June	79			104	66		June 19	[b] 237	37
July				22					

[a] The data for Uganda and Egypt refer to periods of 4 weeks

[b] For 3 weeks only

[1] From the Office of Statistical Investigations, U. S. Public Health Service.

In Egypt 104 plague cases were reported from January 1 to July 22, 1926, as compared with 84 cases reported in the corresponding period of 1925, indicating, however, a very favorable plague situation. During the three weeks from July 2 to 22, 12 cases and 6 deaths were reported, with one case at Alexandria and the others in inland Provinces.

In the Dutch East Indies the plague deaths slightly decreased at the end of May and 167 deaths were reported in the three weeks ended June 5, as compared with 218 in the preceding three weeks

The plague outbreak at Baghdad continued to decline during June, and 15 cases were reported in the town in the two weeks ended July 3, as against 31 in the preceding two weeks.

In French Indo-China there were 9 cases of plague between July 1 and 20, of which 4 were at Saigon, 2 in Chaudoc (Cochin-China), 1 in Pnom-Penh, and 2 in Kandal (Cambodia). The plague incidence during the first five months of 1926 was less than in 1925, but in June and July it exceeded that in the corresponding period of 1925.

Plague cases reported in Indo-China, January–July, 1925 and 1926

Year	Jan	Feb	Mar	Apr	May	June	July
1925	5	--------	18	23	21	10	8
1926	2	7	7	13	3	22	[1] 9

[1] For 20 days only

At Kwang-Chow-Wan, 19 cases of plague were notified in the 10-day period June 21–30, and 18 during the preceding 10 days.

Reports from South American countries showed 34 cases of plague with 6 deaths during June in Peru, 2 cases at Guayaquil, Ecuador, in June, and 1 death at Sao Paulo, Brazil, in the week April 19–25.

Yellow fever.—The following cases of yellow fever are reported: Gold Coast, 3 cases and 1 death during April and 3 cases and 2 deaths during May; Bahia, Brazil, 2 cases and 2 deaths from May 2 to 15.

Typhus.—Among the European countries from which typhus is still reported, European Russia, Poland, Latvia, the Kingdom of the Serbs, Croats, and Slovenes, and Greece showed a considerably lower prevalence for the first six months of 1926 than for the preceding six-month period On the other hand, the prevalence during this period was higher in Czechoslovakia, Lithuania, Rumania, and Bulgaria. In Italy, where only one case had been reported during the period 1922–1925, 31 cases occurred in the first half of 1926 in Naples.

The incidence of typhus in African countries during the first half of 1926 is compared with 1925 in Table 3. The incidence was lower

in 1926 in Algeria, Egypt, and Basutoland, about the same in Tunisia and the Union of South Africa, and somewhat higher in 1926 in Morocco.

TABLE 3.—*Cases of typhus notified in various African countries, 1925 and 1926*

Month	Algeria		Morocco		Tunisia		South Africa		4-week period	Basutoland		Egypt	
	1925	1926	1925	1926	1925	1926	1925	1926		1925	1926	1925	1926
January	21	19	72	39	6	6	96	94	I	1	11	31	35
February	32	44	176	73	4	81	75	69	II	9	0	79	134
March	42	26	26	140	44	93	41	37	III	9	0	178	99
April	105	36	25	159	50	51	49	87	IV	3	2	148	192
May	97	55	59	115	139	43	92	70	V	3	0	292	171
June	114	33	59	12	89	22	66	------	VI	2	------	254	------

Smallpox.—"The usual seasonal lull in smallpox incidence is apparent in the reports from nearly all countries," states the Report. "In northern England, however, while the incidence has decreased as compared to the earlier weeks of the present year, the number of cases reported during June and the early part of July represents an increase over the number of cases notified in corresponding periods of the last two years.

"The unusual prevalence in Japan, noted in previous reports of this year, shows signs of diminution. In India, the first half of the year has been marked by an incidence and mortality from smallpox greater than in recent years; Orissa, Bengal, and the central Provinces suffered most, the situation being relatively favorable in other districts."

Dysentery and enteric fever.—The reports available in the August Epidemiological Report, which refer to the month of June or the first half of July for the most part, did not to date indicate much seasonal rise in the incidence of either dysentery or enteric fever. On the whole, the incidence of these two diseases during the first six months of the present year compared very favorably with the preceding year.

Some increase in dysentery was noted in the reports for Germany, Greece, Japan, Korea, and Palestine.

Malaria.—There were 349,126 cases of malaria reported in European Russia, exclusive of the Ukraine, in the first quarter of 1926 as compared with 412,275 cases in the first quarter of 1925. A lower prevalence was reported in all the different geographical regions, except the Central Black Earth and the Middle and Lower Volga Regions, where the numbers of cases during the first quarter were slightly higher than in 1925. In the Ukraine, 41,770 cases were reported in the first quarter of 1926, less than half the reported incidence in the corresponding period of 1925.

Acute poliomyelitis.—The latest reports, relating to the last week of June and the first two weeks of July, show a slightly increased number of cases of acute poliomyelitis in England, Norway, Sweden, Germany, Italy, and the United States, thus indicating the approaching summer increase of this disease.

Cerebrospinal meningitis—As to epidemic cerebrospinal meningitis, a slight decline is to be noted in the last reports from Sweden; England and Wales, Holland, Austria, and Italy, while a comparatively higher incidence has been reported from Czechoslovakia, Germany, and Poland.

Communicable diseases in China.—The Report this month gives an interesting summary of the results of the efforts of Dr Tsefang F. Huang, Chief of the Department of Administration of the National Epidemic Prevention Bureau at Peking, to obtain information on the prevalence of certain communicable diseases in China Doctor Huang addressed letters to the practitioners of western medicine in the 18 Provinces of China and Manchuria, and inclosed post cards to be filled out and returned monthly. A large proportion of the physicians have been cooperating since May, 1925. The following summary, taken from the Report, was based on the information obtained by Doctor Huang for the 10 months, May, 1925, to February, 1926

It appears from these reports that plague was present (sporadic) in Manchuria during May and June, 1925, prevalent in Kwangtung Province during the same months, and endemic throughout the year in Fukien Province, the only district reporting plague in January-February, 1926 Infected rats were found throughout nearly the whole period in Fukien Province.

Cholera was notified from every reporting Province at some time during the 10 months It appears to have been most prevalent during August, September, and October, but too much reliance must not be placed upon this impression. The Provinces of Chekiang, Hunan, and Kiangsu appeared to suffer most. During January and February, 1926, the reports indicate a decrease, sporadic cases being notified from Anhwei, Honan, Kan-suh, and Kwangtung Provinces, while the disease was said to be prevalent in Chekiang and Shensi.

Smallpox was reported from every Province during the period; it was said to be epidemic in four Provinces during January and February, 1926, and prevalent in nearly all others

Dysentery was said to be present in all reporting Provinces, most prevalent, naturally, during the summer months. Typhus fever was reported from 14 Provinces during the first two months of 1926, and relapsing fever from 10 during the same period Other diseases for which returns were received were epidemic meningitis, diphtheria, and typhoid fever, the latter two being prevalent almost everywhere.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Relation of Summer Rainfall to Mosquito Prevalence.—Thomas J Headlee, New Jersey Agricultural Experiment Stations, New Brunswick, N. J, Bulletin 423, December, 1925, pp. 3–14. (Abstract by J. A Le Prince.)

In this article the writer answers the question, In the absence of mosquitoes why do we continue to have antimosquito work?

Only by constant work can the mosquito pest be held in subjection. Basic facts in mosquito life history are given. Suitable temperature, larval food, and light to support that food, are essentials. Rainfall is a basic factor for larval development in upland, and tide a basic factor on salt marshes Extreme acidity or alkalinity is fatal to larval development. The type of tide most likely to result in mosquito broods is one which runs just high enough to send the water creeping through the grass and filling the depressions The grass acts as a screen and prevents fish from accompanying the creeping water into the depressions.

Flooding of stream channels in the uplands often destroys mosquito breeding, but the net result of heavy rainfall is enormous increase in water accumulations in which larvae can develop Studies of mosquito prevalence indicate distinctly that the number of mosquitoes varies inversely as the intensiveness of antimosquito work.

Malarial Fevers in the United States Army and at Selected Stations.—Maj. Albert G. Love. *Military Surgeon*, Vol. 58, No. 6, June, 1926, pp. 593–610; Vol. 59, No. 1, July, 1926, pp. 69–95. (Abstract by L. D. Fricks.)

This is a brief historical review of malarial fevers in the United States Army from the beginning of the nineteenth century, as compiled from the records of the Surgeon General's office and reports from Army surgeons at different stations. All of these reports indicate a pronounced reduction in malaria in the United States Army during the period covered.

One hundred years ago malarial fevers were responsible for more than 25 per cent of all sick admissions to Army hospitals Since the World War malaria has been responsible for only 1 per cent of admissions In 1841, during the Seminole War, 50 per cent of admissions to post hospitals were attributed to malaria; during the Mexican War, 25 per cent; during the Civil War, 23 per cent; during the Spanish-American War, 23 per cent; and during the World War, one-half of 1 per cent.

In past years epidemic malaria was reported among soldiers stationed at Fort Wayne, Mich. (Detroit), Fort Hamilton, N. Y., and Columbus Barracks, Ohio. In recent years malaria has been controlled on all Army posts in the United States by suitable antimosquito measures.

Protection of Highway Water Supplies.—Earle L. Waterman, Professor of Sanitary Engineering, University of Iowa, Iowa City, Iowa *American Journal of Public Health,* Vol. 16, No. 3, March, 1926, pp 250–256. (Abstract by H. B Hommon.)

By means of a questionnaire, the status of roadside water supply work in 40 States was ascertained In 10 States definite programs for marking safe sources of water supply along the principal highways are being carried out. Sanitary surveys and bacteriological examinations of roadside supplies are made in five States, but no signs are posted In three States water supplies of tourist camps are supervised by State health departments, and preliminary investigations are under way in two States Twenty States reported that no special attempt had been made to supervise roadside water supplies Many State health departments favor the general plan of supervising roadside water supplies without the use of signs, while others favor posting only the unsafe sources of supply.

Discussion by W H Dittoe, formerly State sanitary engineer, Ohio State Department of Health· The Ohio State Department of Health started a systematic survey of water supplies available to the motoring public in February, 1924 Between that date and October, 1925, 1,850 miles of highways were covered and approximately 1,450 water supplies examined. Of the total only 105 were given the "Seal of safety," and of this number, 102 were drilled wells, 2 were springs, and 1 was a dug well A large percentage of the 1,300 sources which were unsatisfactory could be made approved sources with improvement made in their protection.

Rural Water Supplies may Appear Deceptively Pure.—Jack J. Hinman, jr., Associate Professor of Sanitation, University of Iowa, Iowa City, Iowa *The Nation's Health,* Vol. 8, No. 7, July 15, 1926, pp 465–467. (Abstract by Paul S. Fox.)

Rural water supplies may be divided into two classes: The supply for domestic use; and the supply for farm animals, irrigation, and other uses. Domestic water is usually obtained from wells and springs or cisterns Water for animals is commonly obtained from streams or ponds. It would be much better if farm animals were supplied with a good ground water, since surface water may be polluted to such extent as actually to endanger the health of the animals

Analyses of water from private sources 1915–1924, inclusive, were as follows:

Source	Per cent satisfactory
Shallow wells	18 14
Deep wells	68 19
Springs	29 09

The article contains the usual advice in regard to the protection of wells, springs, and cisterns, with a number of illustrations

Sterilization of Water by Liquid Chlorine.—J. M Mathew *The Commonwealth Engineer* (Australia), Vol. 13, No. 1, August 1, 1925, pp 30–33 (Abstract by Sol Pincus.)

An account and description of equipment is given of what appears to be the first use of liquid chlorine for the treatment of a public water supply in Australia The purposes and methods of chlorination are reviewed and reference to its widespread use in water purification in the United States and Canada is made.

The author describes the tests made in applying liquid chlorine through American-made control apparatus to a surface water supply which at times was somewhat turbid and contained the wash from a populated watershed. The results were in agreement with the American experience. The addition of chlorine of 0.4 p. p. m. under moderately favorable conditions gave a water of high degree of purity. The colorimetric test with orthotoluidine giving a residual of 0.1 to 0.2 after 10 minutes was a satisfactory guarantee. Such a dosage, except for local or seasonal modification, would have no adverse effect on the taste of the water.

VENEREAL DISEASE MANUAL FOR SOCIAL AND CORRECTIVE AGENCIES

A new publication entitled "Venereal Disease Manual for Social and Corrective Agencies" has been recently prepared by the United States Public Health Service.

There is a definite relationship between venereal diseases and insanity, dependency, delinquency, crime, and other conditions affecting the social structure. The Public Health Service has had an increasing demand from many individuals and organizations interested in the various branches of social welfare for authentic and comprehensive information concerning the social and economic aspects of the venereal diseases. It was to meet this demand for information that the publication was prepared

In addition to giving fundamental information on the medical aspects of the venereal diseases, their relief and prevention, the manual deals with the socio-economic relationships of these diseases and has chapters on the following subjects: The venereal diseases and the community, sex education, legal aspects of venereal disease control, sex morality and the law. juvenile delinquency, aids in conditioning behavior.

The book should be of especial value to the following groups: Court officials; social workers; police and probation officers; nurses, visiting

teachers, nurses' training schools and schools of social work; superintendents and matrons of homes for the dependent, delinquent, and defective classes.

The publication is bound in green buckram, and owing to the cost of printing and binding it will not be possible for the Public Health Service to distribute it free of charge It may be secured, however, from the Superintendent of Documents, Government Printing Office, Washington, D C , at 50 cents per copy.

DEATHS DURING WEEK ENDED SEPTEMBER 25, 1926

Summary of information received by telegraph from industrial insurance companies for week ended September 25, 1926, and corresponding week of 1925 (From the Weekly Health Index, September 29, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Sept 25, 1926	Corresponding week, 1925
Policies in force	65, 375, 826	61, 108, 375
Number of death claims	11, 028	10, 215
Death claims per 1,000 policies in force, annual rate	8 8	8 7

Deaths from all causes in certain large cities of the United States during the week ended September 25, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, September 29, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Sept 25, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Sept 25, 1926 [2]
	Total deaths	Death rate [1]		Week ended Sept 25, 1926	Corresponding week, 1925	
Total (66 cities)	6, 299	11 3	10 8	840	936	[3] 68
Akron	38	----	----	9	7	97
Albany [4]	27	11 8	18.6	3	4	62
Atlanta	56	----	----	8	10	----
White	26	----	----	5	----	----
Colored	30	(5)	----	3	----	----
Baltimore [4]	210	13 6	12 1	31	40	95
White	156	----	----	22	----	78
Colored	54	(5)	----	9	----	146
Birmingham	49	12 1	13 4	5	7	----
White	29	----	----	4	----	----
Colored	20	(5)	----	1	----	----
Boston	238	15 8	11.4	45	27	126
Bridgeport	20	----	----	2	4	34
Buffalo	122	11 7	12.3	18	23	75
Cambridge	30	12 8	7 8	5	2	89
Canton	18	8 5	5.9	3	2	66
Camden	31	12 3	10 9	3	4	50
Chicago [4]	619	10 6	10 0	78	95	68
Cincinnati	120	15 2	13.8	20	20	125
Cleveland	187	10 2	9.5	23	24	60

Footnotes at end of table

Deaths from all causes in certain large cities of the United States during the week ended September 25, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Sept 25, 1926: Total deaths	Week ended Sept 25, 1926: Death rate	Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year: Week ended Sept 25, 1926	Deaths under 1 year: Corresponding week, 1925	Infant mortality rate, week ended Sept 25, 1926
Columbus	78	14.3	12.9	15	17	
Dallas	66	17.2	10.2	21	7	140
White	61			21		
Colored	5	(5)		0		
Dayton	38	11.2	6.9	8	5	132
Denver	62	11.3	14.5	8	20	
Des Moines	29	10.4	9.2	3	3	50
Detroit	278	11.2	8.8	39	50	64
Duluth	26	12.0	9.4	3	4	70
El Paso	22	10.5	14.4	4	6	
Erie	25			2	5	39
Fall River [4]	27	10.7	10.1	1	3	16
Flint	20	7.6	9.2	5	7	85
Fort Worth	37	12.1	8.9	4	3	
White	28			3		
Colored	9	(5)		1		
Grand Rapids	29	9.7	11.2	4	5	57
Houston	53			13	3	
White	34			4		
Colored	19	(5)		9		
Indianapolis	90	12.8	10.8	5	8	38
White	72			5		42
Colored	18	(5)		0		0
Jersey City	67	11.0	12.6	5	11	38
Kansas City, Kans	33	14.7	12.1	5	4	97
White	21			3		63
Colored	12	(5)		2		263
Kansas City, Mo	84	11.7	12.1	15	9	
Los Angeles	217			15	9	42
Louisville	73	12.2	15.5	10	8	85
White	54			9		90
Colored	19	(5)		1		63
Lowell	31			6	8	116
Lynn	19	9.5	7.6	2	1	53
Memphis	58	17.1	19.4	9	5	
White	27			7		
Colored	31	(5)		2		
Milwaukee	89	9.0	8.3	10	15	17
Minneapolis	88	10.6	9.9	8	7	41
Nashville [4]	39	14.8	9.6	3	2	
White	27			3		
Colored	12	(5)		0		
New Bedford	27			5	5	87
New Haven	56	16.0	9.3	5	5	68
New Orleans	105	13.1	17.4	17	17	
White	54			9		
Colored	51	(5)		8		
New York	1,201	10.6	10.3	161	165	65
Bronx borough	137	7.9	8.1	11	20	47
Brooklyn borough	387	9.0	8.6	55	45	56
Manhattan borough	513	14.3	13.6	74	77	82
Queens borough	128	8.7	7.3	12	19	55
Richmond borough	36	18.1	18.1	6	4	105
Newark, N J	83	9.4	10.5	14	15	67
Norfolk	41	12.3	10.5	7	5	141
White	18			2		59
Colored	23	(5)		5		249
Oakland	41	8.2	7.2	2	3	23
Oklahoma City	24			2	3	
Omaha	36	8.7	12.6	3	9	32
Paterson	26	9.5	10.3	6	1	101
Philadelphia	424	11.0	10.4	49	69	65
Pittsburgh	161	13.2	13.2	20	40	66
Portland, Oreg	57			4	4	40
Providence	48	9.1	9.0	5	4	42
Richmond	42	11.6	12.0	7	14	87
White	24			3		59
Colored	18	(5)		4		140

Footnotes at end of table

Deaths from all causes in certain large cities of the United States during the week ended September 25, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Jan 30, 1926		Annual death rate per 1,000 corresponding week 1925	Deaths under 1 year		Infant mortality rate week ended Sept 25, 1926
	Total deaths	Death rate		Week ended Sept 25, 1926	Corresponding week 1925	
Rochester	52	8.4	9.7	9	6	71
St Louis	187	11.7	9.1	25	16	----------
St Paul	63	13.2	9.3	3	3	26
Salt Lake City [4]	33	12.9	11.1	3	3	46
San Antonio	41	10.4	12.6	10	11	----------
San Diego	27	12.8	13.8	2	0	42
San Francisco	126	11.6	13.1	6	7	36
Schenectady	17	9.5	6.7	1	3	29
Seattle	60	----------	----------	9	3	87
Somerville	17	8.9	8.4	2	2	57
Spokane	25	12.0	11.5	3	5	70
Springfield, Mass	35	12.6	9.5	6	3	92
Syracuse	34	9.6	10.9	3	9	38
Tacoma	20	9.8	14.0	0	1	0
Toledo	76	13.5	10.9	20	11	193
Trenton	30	11.7	12.2	3	3	51
Utica	27	13.7	18.0	2	6	46
Washington, D C	116	11.5	14.0	12	29	69
White	78	----------	----------	8	----------	66
Colored	38	(5)	----------	4	----------	73
Waterbury	17	----------	----------	1	5	24
Wilmington, Del	22	9.3	11.5	3	6	67
Worcester	47	12.7	12.3	6	8	72
Yonkers	15	6.7	4.1	1	0	23
Youngstown	22	7.0	10.8	3	9	38

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births Cities left blank are not in registration area for births

[3] Data for 64 cities

[4] Deaths for week ended Friday, Sept 24, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta, 31, Baltimore, 15, Birmingham, 39, Dallas, 15, Fort Worth, 14, Houston, 25, Indianapolis, 11, Kansas City, Kans , 14, Louisville, 17, Memphis, 38, Nashville, 30, New Orleans, 26, Norfolk, 38, Richmond, 32, and Washington, D. C , 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended October 2, 1926

ARIZONA	Cases
Chicken pox	8
Diphtheria	1
Lethargic encephalitis	1
Poliomyelitis	1
Scarlet fever	6
Trachoma	6
Tuberculosis	33
Typhoid fever	9
ARKANSAS	
Chicken pox	16
Diphtheria	7
Hookworm disease	3
Influenza	22
Malaria	183
Measles	5
Mumps	1
Ophthalmia neonatorum	1
Pellagra	14
Scarlet fever	6
Smallpox	1
Tuberculosis	18
Typhoid fever	54
Whooping cough	35
CALIFORNIA	
Cerebrospinal meningitis	
Alameda	1
San Francisco	1
San Joaquin County	1
Tulare County	1
Chicken pox	77
Diphtheria	97
Influenza	19
Lethargic encephalitis	
Burbank	1
Los Angeles	1

CALIFORNIA—continued	Cases
Measles	375
Mumps	100
Poliomyelitis	
Lincoln	1
Los Angeles	1
Los Angeles County	2
San Diego	1
Scarlet fever	105
Smallpox	4
Tuberculosis	140
Typhoid fever	17
Whooping cough	43
COLORADO	
Chicken pox	2
Diphtheria	26
Impetigo contagiosa	1
Lethargic encephalitis	1
Measles	6
Mumps	1
Paratyphoid fever	6
Pellagra	1
Pneumonia	3
Scarlet fever	16
Smallpox	2
Tuberculosis	49
Typhoid fever	7
Vincent's angina	1
Whooping cough	8
CONNECTICUT	
Anthrax	1
Cerebrospinal meningitis	2
Chicken pox	10
Diphtheria	14
German measles	1
Influenza	2
Measles	7

CONNECTICUT—continued

	Cases
Mumps	3
Paratyphoid fever	3
Pneumonia (broncho)	13
Pneumonia (lobar)	23
Poliomyelitis	4
Scarlet fever	30
Septic sore throat	1
Tuberculosis (all forms)	40
Typhoid fever	3
Whooping cough	23

DELAWARE

Diphtheria	2
Influenza	1
Malaria	2
Pneumonia	1
Scarlet fever	6

FLORIDA

Chicken pox	1
Dengue	1
Diphtheria	32
Influenza	2
Malaria	7
Mumps	4
Paratyphoid fever	1
Pneumonia	11
Scarlet fever	5
Smallpox	1
Tetanus	1
Tuberculosis	16
Typhoid fever	13
Whooping cough	4

GEORGIA

Chicken pox	12
Conjunctivitis (acute)	1
Diphtheria	71
Dysentery	11
Influenza	35
Malaria	85
Measles	2
Mumps	2
Paratyphoid fever	6
Pellagra	4
Pneumonia	21
Poliomyelitis	1
Scarlet fever	23
Septic sore throat	7
Smallpox	11
Tuberculosis	14
Typhoid fever	91
Typhus fever	3
Whooping cough	5

IDAHO

Chicken pox	3
Diphtheria	8
Measles	4
Mumps	1
Scarlet fever	12
Smallpox	2
Typhoid fever	4
Whooping cough	2

ILLINOIS

	Cases
Cerebrospinal meningitis	
Cook County	1
Knox County	1
Madison County	1
Stephenson County	1
Chicken pox	52
Diphtheria	93
Influenza	19
Lethargic encephalitis	
Cook County	3
Crawford County	1
Lee County	1
Madison County	1
Morgan County	1
Peoria County	1
Measles	64
Mumps	22
Pneumonia	138
Poliomyelitis	
Lake County	1
McHenry County	1
Richland County	1
Scarlet fever	145
Smallpox	1
Tuberculosis	279
Typhoid fever	91
Whooping cough	140

INDIANA

Cerebrospinal meningitis	1
Chicken pox	22
Diphtheria	45
Influenza	20
Measles	9
Mumps	1
Pneumonia	6
Poliomyelitis	1
Scarlet fever	57
Smallpox	3
Trachoma	4
Tuberculosis	24
Typhoid fever	31
Whooping cough	28

IOWA

Cerebrospinal meningitis	[illegible]
Chicken pox	2
Diphtheria	18
German measles	1
Measles	4
Mumps	1
Poliomyelitis	5
Scarlet fever	14
Smallpox	2
Tuberculosis	12
Typhoid fever	2
Whooping cough	1

KANSAS

Cerebrospinal meningitis—Ashland	1
Chicken pox	9
Diphtheria	14
German measles	2
Influenza	2

KANSAS—continued

	Cases
Malaria	3
Measles	7
Mumps	2
Pellagra	1
Pneumonia	9
Poliomyelitis	
Bison	1
Hutchinson	1
Hutchinson, R. F. D	1
Scarlet fever	37
Smallpox	2
Tuberculosis	15
Typhoid fever	27
Whooping cough	52

LOUISIANA

Diphtheria	24
Influenza	12
Malaria	3
Paratyphoid fever	1
Pneumonia	21
Scarlet fever	7
Smallpox	2
Tuberculosis	28
Typhoid fever	19
Whooping cough	9

MAINE

Chicken pox	9
Diphtheria	3
German measles	1
Influenza	4
Measles	24
Mumps	1
Pneumonia	3
Poliomyelitis	1
Scarlet fever	13
Tuberculosis	10
Typhoid fever	2
Vincent's angina	1
Whooping cough	4

MARYLAND [1]

Chicken pox	4
Diphtheria	19
Dysentery	5
German measles	1
Influenza	5
Malaria	5
Measles	8
Mumps	6
Ophthalmia neonatorum	2
Paratyphoid fever	1
Pellagra	1
Pneumonia (broncho)	3
Pneumonia (lobar)	9
Poliomyelitis	2
Scarlet fever	21
Tuberculosis	45
Typhoid fever	48
Vincent's angina	1
Whooping cough	39

MASSACHUSETTS

Cerebrospinal meningitis	2
Chicken pox	45
Diphtheria	68

[1] Week ended Friday

MASSACHUSETTS—continued

	Cases
Influenza	12
Lethargic encephalitis	2
Measles	11
Mumps	55
Ophthalmia neonatorum	2
Pneumonia (lobar)	38
Poliomyelitis	8
Scarlet fever	124
Septic sore throat	3
Tetanus	2
Trachoma	1
Tuberculosis (pulmonary)	97
Tuberculosis (other forms)	22
Typhoid fever	18
Whooping cough	67

MICHIGAN

Diphtheria	110
Measles	32
Pneumonia	37
Scarlet fever	87
Smallpox	3
Tuberculosis	281
Typhoid fever	20
Whooping cough	91

MINNESOTA

Chicken pox	25
Diphtheria	53
Lethargic encephalitis	1
Measles	10
Pneumonia	1
Poliomyelitis	3
Scarlet fever	135
Smallpox	3
Tuberculosis	50
Typhoid fever	14
Whooping cough	28

MISSISSIPPI

Diphtheria	22
Scarlet fever	9
Smallpox	1
Typhoid fever	28

MISSOURI

(Exclusive of Kansas City)

Chicken pox	9
Diphtheria	31
Malaria	1
Measles	3
Mumps	2
Ophthalmia neonatorum	1
Scarlet fever	40
Tuberculosis	23
Typhoid fever	30
Whooping cough	12

MONTANA

Chicken pox	3
Diphtheria	12
Measles	4
Scarlet fever	30
Smallpox	3
Tuberculosis	3
Typhoid fever	5
Whooping cough	7

NEBRASKA

	Cases
Chicken pox	9
Diphtheria	3
Mumps	1
Poliomyelitis	1
Scarlet fever	14
Smallpox	5
Tuberculosis	1
Whooping cough	28

NEW JERSEY

	Cases
Chicken pox	14
Diphtheria	46
Dysentery	1
Measles	7
Pneumonia	36
Poliomyelitis	5
Scarlet fever	49
Typhoid fever	34
Whooping cough	91

NEW MEXICO

	Cases
Diphtheria	7
Influenza	1
Malaria	5
Measles	3
Mumps	1
Pneumonia	2
Scarlet fever	13
Trachoma	1
Tuberculosis	23
Typhoid fever	13
Whooping cough	8

NEW YORK

(Exclusive of New York City)

	Cases
Anthrax	1
Chicken pox	61
Diphtheria	37
Dysentery	4
German measles	30
Influenza	1
Malaria	9
Measles	53
Mumps	25
Pneumonia	81
Poliomyelitis	23
Scarlet fever	52
Septic sore throat	2
Typhoid fever	59
Vincent's angina	8
Whooping cough	114

NORTH CAROLINA

	Cases
Chicken pox	3
Diphtheria	147
Dysentery (bacillary)	3
German measles	4
Malaria	20
Measles	4
Poliomyelitis	3
Scarlet fever	94
Septic sore throat	1
Smallpox	3
Typhoid fever	55
Whooping cough	127

[2] Deaths

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Diphtheria	24
Influenza	50
Malaria	113
Pellagra	8
Scarlet fever	24
Typhoid fever	106
Whooping cough	23

OREGON

	Cases
Cerebrospinal meningitis	1
Chicken pox	15
Diphtheria	5
Influenza	12
Malaria	1
Measles	9
Mumps	9
Pneumonia	[2] 9
Poliomyelitis	1
Scarlet fever	39
Smallpox	8
Tuberculosis	19
Typhoid fever	18
Whooping cough	2

PENNSYLVANIA

	Cases
Chicken pox	110
Diphtheria	144
German measles	4
Impetigo contagiosa	18
Measles	194
Mumps	15
Pneumonia	17
Poliomyelitis	
Bradford	1
Chambersburg	1
Clearfield	1
Reading	1
Rouseville	1
Scabies	6
Scarlet fever	153
Tetanus	2
Tuberculosis	106
Typhoid fever	91
Whooping cough	299

RHODE ISLAND

	Cases
Diphtheria	2
Influenza	2
Measles	1
Scarlet fever	3
Tuberculosis	12
Typhoid fever	6
Whooping cough	8

SOUTH DAKOTA

	Cases
Anthrax	2
Diphtheria	5
Measles	19
Mumps	2
Pneumonia	2
Scarlet fever	27
Tuberculosis	1
Typhoid fever	3
Whooping cough	7

TENNESSEE

	Cases
Cerebrospinal meningitis—Memphis	1
Chicken pox	5
Diphtheria	64
Influenza	10
Malaria	79
Measles	1
Mumps	1
Ophthalmia neonatorum	1
Pellagra	6
Pneumonia	1
Scarlet fever	33
Smallpox	1
Tuberculosis	20
Typhoid fever	126
Whooping cough	43

TEXAS

Anthrax	1
Diphtheria	18
Influenza	31
Mumps	2
Pneumonia	7
Poliomyelitis	1
Scarlet fever	8
Smallpox	2
Tuberculosis	4
Typhoid fever	7
Whooping cough	6

UTAH

Chicken pox	9
Diphtheria	11
Measles	18
Pneumonia	2
Scarlet fever	7
Smallpox	6
Typhoid fever	7
Whooping cough	18

VERMONT

Chicken pox	4
Diphtheria	1
Measles	61
Mumps	2
Poliomyelitis	2
Scarlet fever	13
Whooping cough	23

WASHINGTON

Chicken pox	20
Diphtheria	24
German measles	2
Measles	7
Mumps	18

WASHINGTON—continued

	Cases
Scarlet fever	74
Smallpox	3
Tuberculosis	7
Typhoid fever	16
Whooping cough	7

WEST VIRGINIA

Chicken pox	2
Diphtheria	26
Influenza	4
Measles	7
Scarlet fever	35
Smallpox	1
Tuberculosis	12
Typhoid fever	70
Whooping cough	73

WISCONSIN

Milwaukee	
Chicken pox	11
Diphtheria	10
German measles	1
Lethargic encephalitis	1
Measles	1
Mumps	6
Ophthalmia neonatorum	2
Pneumonia	13
Scarlet fever	6
Tuberculosis	14
Whooping cough	40
Scattering	
Cerebrospinal meningitis	1
Chicken pox	11
Diphtheria	25
German measles	4
Influenza	15
Measles	73
Mumps	7
Pneumonia	1
Poliomyelitis	3
Scarlet fever	37
Smallpox	7
Tuberculosis	11
Typhoid fever	6
Whooping cough	137

WYOMING

Chicken pox	3
Diphtheria	1
Influenza	1
Measles	6
Scarlet fever	8
Whooping cough	5

Reports for Week Ended September 25, 1926

DISTRICT OF COLUMBIA	Cases
Chicken pox	1
Diphtheria	8
Measles	2
Pneumonia	9
Scarlet fever	7
Tuberculosis	39
Typhoid fever	6
Whooping cough	8

NORTH DAKOTA	Cases
Chicken pox	6
Measles	6
Mumps	3
Pneumonia	1
Scarlet fever	24
Trachoma	47
Tuberculosis	5

NORTH DAKOTA—continued	Cases
Typhoid fever	4
Whooping cough	14

SOUTH CAROLINA	Cases
Chicken pox	9
Dengue	6
Diphtheria	64
Hookworm disease	48
Influenza	195
Malaria	624
Mealses	8
Paratyphoid feve	10
Pellagra	53
Poliomyelitis	8
Scarlet fever	20
Smallpox	6
Tuberculosis	47
Typhoid fever	82
Whooping cough	33

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
August, 1926										
Arkansas	0	8	106	733	17	95	3	16	40	325
California	10	270	25	22	462	5	20	214	39	124
Idaho	0	22	3		8		1	15	5	20
Mississippi		70	395	12,050	277	741	8	32	7	442
Montana	1	19	5		21		5	30	12	27
Oregon	1	51	36	8	79		0	83	40	42
Rhode Island	1	15	2	4	11		3	15	0	4
South Dakota	2	10			68		1	77	5	16
Virginia	6	128	368	208	171	21	6	92	16	312
Washington	10	68	8		57		4	98	61	64

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria—For the week ended September 18, 1926, 38 States reported 1,058 cases of diphtheria. For the week ended September 19, 1925, the same States reported 1,095 cases of this disease. Ninety-seven cities, situated in all parts of the country and having an aggregate population of more than 30,100,000, reported 484 cases of diphtheria for the week ended September 18, 1926 Last year for the corresponding week they reported 537 cases. The estimated expectancy for these cities was 708 cases The estimated expectancy is based on the experience of the last nine years, excluding epidemics

Measles.—Thirty-five States reported 637 cases of measles for the week ended September 18, 1926, and 277 cases of this disease for the week ended September 19, 1925. Ninety-seven cities reported 160 cases of measles for the week this year, and 164 cases last year

Poliomyelitis.—The health officers of 38 States reported 115 cases of poliomyelitis for the week ended September 18, 1926. The same States reported 275 cases for the week ended September 19, 1925.

Scarlet fever—Scarlet fever was reported for the week as follows: Thirty-eight States—this year, 1,044 cases, last year, 831 cases, 97 cities—this year, 386 cases, last year, 343 cases, estimated expectancy, 361 cases.

Smallpox—For the week ended September 18, 1926, 38 States reported 98 cases of smallpox Last year for the corresponding week they reported 119 cases. Ninety-seven cities reported smallpox for the week as follows. 1926, 6 cases, 1925, 34 cases, estimated expectancy, 23 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever—One thousand three hundred and thirty-six cases of typhoid fever were reported for the week ended September 18, 1926, by 38 States. For the corresponding week of 1925 the same States reported 1,190 cases of this disease. Ninety-seven cities reported 307 cases of typhoid fever for the week this year and 281 cases for the corresponding week last year. The estimated expectancy for these cities was 240 cases.

Influenza and pneumonia—Deaths from influenza and pneumonia were reported for the week by 91 cities, with a population of more than 29,480,000, as follows: 1926, 323 deaths; 1925, 358 deaths.

City reports for week ended September 18, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine:									
Portland	75,333	0	0	0	0	0	0	0	5
New Hampshire.									
Concord	22,546	0	0	0	0	0	0	0	0
Manchester	83,097	0	3	0	0	0	0	0	1
Vermont:									
Barre	10,008	0	0	0	0	0	0	0	0
Burlington	24,089	0	1	0	0	0	0	0	0

City reports for week ended September 18, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND—con									
Massachusetts									
Boston	779,620	1	32	7	2	0	6	8	11
Fall River	128,993	0	3	1	0	0	0	1	0
Springfield	142,065	0	2	0	0	0	1	0	0
Worcester	190,757	2	4	3	0	0	0	0	1
Rhode Island									
Pawtucket	69,760	0	0	0	0	0	0	0	0
Providence	267 918	0	4	0	0	0	1	0	1
Connecticut									
Bridgeport	([1])	0	5	4	0	0	0	1	0
Hartford	160,197	2	4	0	1	0	0	0	4
New Haven	178 927	0	3	0	0	0	0	0	1
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	3	16	4	-------	0	0	0	0
New York	5,873,356	13	105	85	19	4	8	70	72
Rochester	316,786	2	4	2	-------	0	4	1	0
Syracuse	182,003	5	5	0	-------	0	3	0	2
New Jersey									
Camden	128,642	2	2	2	0	0	0	0	1
Newark	452,513	0	9	4	0	0	1	2	1
Trenton	132,020	0	4	0	0	0	0	0	1
Pennsylvania									
Philadelphia	1,979,364	4	49	23	-------	2	1	2	20
Pittsburgh	631 563	4	19	6	-------	0	3	0	5
Reading	112,707	1	2	0	-------	0	0	0	1
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	2	10	8	0	0	0	1	5
Cleveland	936,485	10	28	20	0	1	0	0	7
Columbus	279,836	1	4	3	0	0	0	1	5
Toledo	287,380	0	9	1	0	0	0	0	1
Indiana									
Fort Wayne	97,846	0	2	0	0	0	0	0	0
Indianapolis	358,819	0	7	4	0	0	1	0	5
South Bend	80,091	0	1	2	0	0	0	0	0
Terre Haute	71,071	0	1	0	0	0	0	0	0
Illinois									
Chicago	2,995,239	8	72	35	6	2	22	5	21
Peoria	81,564	0	1	0	0	0	2	0	2
Springfield	63,923	0	1	0	1	1	2	0	1
Michigan									
Detroit	1,245,824	5	35	55	0	0	0	0	9
Flint	130,316	4	6	1	0	0	2	0	0
Grand Rapids	153,698	1	2	1	1	0	0	1	1
Wisconsin									
Kenosha	50,891	0	1	0	0	1	2	0	0
Madison	46,385	1	0	1	0	0	2	3	1
Milwaukee	509 192	8	12	7	0	0	1	9	3
Racine	67,707	-------	1	-------	-------	-------	-------	-------	-------
Superior	39,671	0	1	1	0	0	0	0	1
WEST NORTH CENTRAL									
Minnesota									
Duluth	110 502	0	2	1	0	0	3	0	1
Minneapolis	425 435	1	20	12	0	0	0	0	4
St Paul	246,001	0	14	6	0	0	1	0	3
Iowa									
Davenport	52,469	0	1	0	0	-------	4	0	-------
Des Moines	141,411	0	4	0	0	-------	0	0	-------
Sioux City	76,411	1	1	2	0	-------	0	1	-------
Waterloo	36,771	0	1	0	0	-------	2	0	-------
Missouri									
Kansas City	367 481	0	6	1	1	1	0	0	6
St Joseph	78 342	0	2	0	0	0	0	0	1
St Louis	821,543	0	22	21	0	0	0	2	-------

[1] No estimate made.

City reports for week ended September 18, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST NORTH CENTRAL—continued									
North Dakota									
Fargo	26,403	0	1	0	0	0	0	4	0
South Dakota									
Aberdeen	15,036	0	0	1	0		0	0	
Sioux Falls	30,127	0	0	0	0	0	0	0	0
Nebraska									
Lincoln	60,941	0	1	1	0	0	0	0	0
Omaha	211,768	0	12	1	0	0	0	0	5
Kansas									
Topeka	55,411	0	1	0	1	1	0	0	1
Wichita	88,367	0	2	0	0	0	0	0	3
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	1	1	0	0	0	0	1
Maryland									
Baltimore	796,296	2	17	15	2	2	2	2	9
Cumberland	33,741	0	1	0	0	0	0	0	0
Frederick	12,035	0	0	1	0	0	0	0	0
District of Columbia									
Washington	497,906	7	6	11	1	1	0	0	7
Virginia									
Lynchburg	30,395	0	1	3	0	0	0	0	0
Norfolk	(1)	2	1	1	0	0	0	0	0
Richmond	186,403	0	14	13	0	0	0	0	0
Roanoke	58,208	1	4	0	0	0	0	0	0
West Virginia									
Charleston	49,019	0	2	0	0	0	0	0	2
Huntington	63,485	0	2	2	0	0	0	0	0
Wheeling	56,208	1	2	1	0	0	0	0	0
North Carolina									
Raleigh	30,371	0	3	1	0	0	0	0	0
Wilmington	37,061	0	1	0	0	0	0	0	1
Winston-Salem	69,031	0	2	0	0	0	1	1	0
South Carolina									
Charleston	73,125	0	1	1	6	0	0	0	1
Columbia	41,225	0	2	1	0	0	0	1	0
Greenville	27,311	0	1	2	0	0	0	0	0
Georgia									
Atlanta	(1)	1	5	7	5	0	1	0	6
Brunswick	16,809	0	0	0	0	0	0	1	0
Savannah	93,134	0	1	0	5	0	0	0	2
Florida									
Miami	69,754	2		5	0	0	0	1	2
St Petersburg	26,847		0			0			0
Tampa	94,743	0	1	1	0	0	1	0	0
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309		1						
Louisville	305,935	1	7	3	1	0	0	0	5
Tennessee									
Memphis	174,533	1	6	4	0	0	0	2	0
Nashville	136,220	0	3	6	0	0	0	0	2
Alabama									
Birmingham	205,670	1	5	5	2	0	3	0	1
Mobile	65,955	0	1	0	0	1	0	0	1
Montgomery	46,481	0	2	3	2	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	31,643	0	0	0	0		0	0	
Little Rock	74,216	0	1	0	0	0	0	0	2
Louisiana:									
New Orleans	414,493	0	7	3	5	5	0	0	8
Shreveport	57,857	0	0	3	0	0	0	0	2
Oklahoma:									
Oklahoma City	(1)	1	2	0	0	0	0	0	2

(1) No estimate made.

City reports for week ended September 18, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST SOUTH CENTRAL—continued									
Texas									
Dallas	194,450	1	5	4	0	0	0	0	7
Galveston	48,375	0	0	0	0	0	0	0	1
Houston	164,954	0	2	5	0	0	0	0	2
San Antonio	198,069	0	1	3	0	0	1	0	4
MOUNTAIN									
Montana									
Billings	17,971	0	0	1	0	0	0	0	0
Great Falls	29,883	1	0	0	0	0	0	0	0
Helena	12,037	0	0	0	0	0	0	0	1
Missoula	12,668	1	0	0	0	0	0	2	1
Idaho									
Boise	23,042	0	0	1	0	0	1	0	0
Colorado									
Denver	280,911	2	10	20	-------	0	1	0	5
Pueblo	43,787	0	5	0	0	0	0	0	1
New Mexico									
Albuquerque	21,000	0	0	1	0	0	0	0	0
Arizona									
Phoenix	38,669	0	1	0	0	0	1	0	1
Utah									
Salt Lake City	130,948	1	3	4	0	0	6	1	5
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	6	4	0	0	-------	5	3	-------
Spokane	108,897	1	2	1	0	-------	5	0	-------
Tacoma	104,455	-------	2	-------	-------	-------	-------	-------	-------
Oregon									
Portland	282,383	1	5	10	0	0	3	2	2
California									
Los Angeles	(1)	7	25	17	4	0	5	5	6
Sacramento	72,260	0	2	1	0	0	2	2	3
San Francisco	557,530	19	13	15	1	2	62	10	6

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine											
Portland	1	1	0	0	0	0	1	2	2	10	32
New Hampshire											
Concord	0	0	0	0	0	0	0	0	0	0	6
Manchester	0	1	0	0	0	0	0	0	0	0	18
Vermont											
Barre	0	0	0	0	0	1	0	0	0	0	3
Burlington	1	0	0	0	0	0	0	0	0	0	6
Massachusetts											
Boston	15	19	0	0	0	10	5	6	0	36	160
Fall River	1	0	0	0	0	3	2	0	0	3	22
Springfield	2	0	0	0	0	0	0	0	0	5	29
Worcester	3	8	0	0	0	2	1	1	0	0	41
Rhode Island											
Pawtucket	0	0	0	0	0	1	0	0	0	0	11
Providence	2	1	0	0	0	1	2	2	0	2	56
Connecticut											
Bridgeport	2	1	0	0	0	1	1	0	0	0	31
Hartford	2	1	0	0	0	0	2	2	0	3	35
New Haven	2	1	0	0	0	0	4	1	0	0	21

[1] No estimate made

City reports for week ended September 18, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
MIDDLE ATLANTIC											
New York											
Buffalo	6	2	0	0	0	6	3	2	1	7	122
New York	34	43	0	0	0	[1] 93	44	71	2	87	1,130
Rochester	3	2	0	0	0	4	2	3	0	3	48
Syracuse	4	1	0	0	0	1	2	3	1	12	51
New Jersey											
Camden	2	2	0	0	0	2	1	2	0	1	18
Newark	5	7	0	0	0	5	2	8	0	50	100
Trenton	0	0	0	0	0	3	1	1	0	2	25
Pennsylvania											
Philadelphia	19	28	0	0	0	36	13	15	1	36	401
Pittsburgh	15	4	0	0	0	7	4	4	0	32	148
Reading	1	0	0	0	0	0	2	1	1	16	24
EAST NORTH CENTRAL											
Ohio											
Cincinnati	5	5	1	0	0	8	2	4	1	4	114
Cleveland	11	4	0	0	0	20	4	6	0	57	177
Columbus	3	3	0	0	0	5	1	0	0	7	59
Toledo	5	3	0	0	0	2	3	1	0	25	57
Indiana											
Fort Wayne	1	2	0	0	0	0	2	2	0	7	26
Indianapolis	4	5	1	0	0	5	3	3	0	12	92
South Bend	2	0	1	0	0	0	1	0	0	0	8
Terre Haute	1	3	0	0	0	0	0	0	0	0	18
Illinois:											
Chicago	36	29	1	0	0	53	8	3	0	54	606
Peoria	3	0	0	0	0	0	1	0	0	3	16
Springfield	0	1	0	0	0	1	1	0	0	0	16
Michigan											
Detroit	30	19	2	0	0	22	5	20	1	68	252
Flint	4	3	0	0	0	0	1	1	0	4	29
Grand Rapids	3	4	0	0	0	0	1	1	0	3	32
Wisconsin											
Kenosha	0	0	0	0	0	0	1	0	0	18	9
Madison	1	6	0	0	0	1	0	0	0	6	8
Milwaukee	13	8	1	0	0	4	0	1	0	45	82
Racine	2	--------	0	--------	--------	--------	1	--------	--------	--------	--------
Superior	1	1	1	0	0	0	0	0	0	0	2
WEST NORTH CENTRAL											
Minnesota											
Duluth	4	4	0	0	0	0	0	0	0	10	22
Minneapolis	16	21	0	0	0	4	2	1	0	0	75
St. Paul	7	9	2	0	0	1	2	0	1	8	59
Iowa											
Davenport	0	1	0	0	--------	--------	0	0	--------	0	--------
Des Moines	3	0	1	0	--------	--------	0	0	--------	2	--------
Sioux City	1	3	0	0	--------	--------	0	0	--------	3	--------
Waterloo	1	3	0	0	--------	--------	0	0	--------	0	--------
Missouri											
Kansas City	3	1	0	0	0	7	3	2	2	2	109
St. Joseph	1	0	0	0	0	0	1	0	0	0	20
St. Louis	13	14	0	0	0	5	7	4	0	12	179
North Dakota											
Fargo	1	5	0	0	0	1	0	0	0	1	12
South Dakota.											
Aberdeen	2	0	0	0	--------	--------	0	0	--------	0	--------
Sioux Falls	1	0	0	0	0	0	0	0	0	0	2
Nebraska:											
Lincoln	1	2	0	0	0	0	0	0	0	2	15
Omaha	2	1	0	0	0	1	1	1	0	0	67
Kansas:											
Topeka	2	2	0	0	0	0	1	5	0	8	12
Wichita	1	1	0	0	0	0	2	0	0	5	31

[1] Pulmonary tuberculosis only.

City reports for week ended September 18, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
SOUTH ATLANTIC											
Delaware											
Wilmington	1	1	0	0	0	2	0	0	0	1	27
Maryland											
Baltimore	6	3	0	0	0	17	11	11	2	67	191
Cumberland	0	0	0	0	0	0	1	0	1	0	13
Frederick	0	0	0	0	0	0	0	0	0	0	3
District of Columbia											
Washington	5	1	0	0	0	11	5	7	0	10	119
Virginia											
Lynchburg	0	3	0	0	0	2	2	1	1	3	17
Norfolk	1	1	0	0	0	2	1	0	0	13	--------
Richmond	5	4	0	0	0	2	2	6	0	0	47
Roanoke	1	2	0	0	0	1	2	0	0	0	13
West Virginia											
Charleston	1	2	0	0	0	0	2	0	1	4	17
Huntington	1	1	0	0	0	1	1	0	1	0	12
Wheeling	2	1	0	0	0	1	2	2	0	0	13
North Carolina											
Raleigh	0	0	0	0	0	0	1	0	0	9	7
Wilmington	1	0	0	1	0	0	1	0	0	8	11
Winston-Salem	1	3	1	0	0	2	2	0	1	2	17
South Carolina											
Charleston	0	0	0	0	0	1	3	2	2	0	25
Columbia	1	0	0	0	0	0	1	2	0	0	--------
Greenville	0	0	0	3	0	1	1	1	0	3	11
Georgia 9											
Atlanta	4	4	1	0	0	5	4	7	1	4	61
Brunswick	0	0	0	0	0	0	1	0	0	0	2
Savannah	0	0	1	1	0	5	1	3	0	0	32
Florida											
Miami	--------	0	--------	0	0	1	--------	0	0	5	21
St Petersburg	0	--------	0	--------	0	0	0	--------	0	--------	6
Tampa	0	1	1	0	0	0	0	1	0	0	--------
EAST SOUTH CENTRAL											
Kentucky											
Covington	0	--------	0	--------	--------	--------	1	--------	--------	--------	--------
Louisville	1	12	0	0	0	6	5	11	0	3	85
Tennessee											
Memphis	1	5	0	0	0	1	6	11	4	16	62
Nashville	3	2	0	0	0	6	5	17	5	11	54
Alabama											
Birmingham	4	4	0	0	0	5	7	9	1	11	49
Mobile	0	0	0	0	0	1	0	0	0	0	15
Montgomery	0	0	0	0	0	0	1	0	0	5	13
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	0	0	--------	--------	0	0	--------	1	--------
Little Rock	1	1	0	0	0	1	2	1	0	0	--------
Louisiana											
New Orleans	2	1	0	0	0	13	5	6	0	1	155
Shreveport	1	3	1	0	0	3	5	3	0	0	29
Oklahoma											
Oklahoma City	1	2	0	0	0	2	2	2	0	0	26
Texas											
Dallas	1	2	1	1	0	3	2	2	0	0	48
Galveston	0	0	0	0	0	0	0	0	0	0	10
Houston	1	0	0	0	0	2	0	3	0	0	51
San Antonio	0	0	0	0	0	6	0	1	0	0	60
MOUNTAIN											
Montana											
Billings	1	0	0	0	0	0	0	0	0	0	5
Great Falls	1	0	1	0	0	0	0	1	0	0	7
Helena	0	0	0	0	0	0	0	0	0	0	5
Missoula	0	0	0	0	0	0	0	1	0	0	6

City reports for week ended September 18, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
MOUNTAIN—con.											
Idaho:											
Boise	0	2	0	0	0	0	1	0	0	0	3
Colorado:											
Denver	4	6	1	0	0	7	5	4	1	3	75
Pueblo	1	0	0	0	0	1	1	1	0	0	10
New Mexico:											
Albuquerque	0	0	0	0	0	3	2	0	0	0	12
Arizona:											
Phoenix	-------	1	0	0	0	4	0	0	0	0	11
Utah:											
Salt Lake City	1	1	0	0	0	0	2	2	0	7	28
Nevada:											
Reno	0	0	0	0	0	0	0	0	0	0	2
PACIFIC											
Washington:											
Seattle	5	13	1	0	-------	-------	2	2	-------	2	-------
Spokane	4	2	1	0	-------	-------	1	0	-------	0	-------
Tacoma	2	-------	1	-------	-------	-------	0	-------	-------	-------	-------
Oregon:											
Portland	4	11	2	2	0	2	2	1	0	0	49
California:											
Los Angeles	7	14	1	0	0	21	5	1	1	6	192
Sacramento	1	2	1	0	0	0	1	3	0	1	27
San Francisco	5	12	1	0	0	2	1	7	2	6	117

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis: Cases	Poliomyelitis: Deaths
NEW ENGLAND									
Massachusetts:									
Boston	1	3	1	1	0	0	2	3	0
Fall River	1	0	0	0	0	0	1	0	0
Springfield	0	0	0	0	0	0	0	2	0
Rhode Island:									
Providence	0	0	0	1	0	0	0	1	0
MIDDLE ATLANTIC									
New York:									
Buffalo	0	0	0	0	0	0	1	14	2
New York	2	1	2	1	0	0	11	3	0
Rochester	0	0	0	0	0	0	1	2	0
Syracuse	0	0	0	0	0	0	1	3	0
New Jersey:									
Newark	0	0	0	0	0	0	0	1	0
Pennsylvania:									
Philadelphia	1	1	0	0	0	0	1	1	0
Pittsburgh	0	0	0	1	0	0	1	0	0
EAST NORTH CENTRAL									
Ohio:									
Columbus	0	1	0	0	0	0	0	0	0
Illinois:									
Chicago	0	1	1	1	0	0	5	1	0
Michigan:									
Detroit	0	0	0	1	0	0	1	7	0
Flint	0	0	0	0	0	0	0	1	0

City reports for week ended September 18, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
WEST NORTH CENTRAL									
Iowa									
Davenport	1	1	0	0	0	0	0	0	0
Missouri									
Kansas City	0	0	0	0	0	0	0	1	0
SOUTH ATLANTIC									
Delaware									
Wilmington	1	0	0	0	0	0	0	0	0
Maryland									
Baltimore	1	2	0	0	1	1	1	2	1
District of Columbia									
Washington	0	0	0	0	1	1	0	0	0
Virginia									
Richmond	0	0	0	0	2	1	0	0	0
South Carolina									
Charleston [1]	0	0	0	0	1	0	0	0	0
Georgia									
Atlanta	0	0	0	0	2	2	0	0	0
Savannah	0	0	0	0	0	1	0	0	0
EAST SOUTH CENTRAL									
Tennessee									
Memphis	0	0	0	0	0	1	0	0	0
Alabama									
Mobile	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	4	0	0	0
Louisiana									
New Orleans	0	0	1	1	1	1	1	0	0
Oklahoma									
Oklahoma City	0	0	0	0	0	0	0	1	0
Texas									
San Antonio	0	0	0	0	0	1	0	0	0
MOUNTAIN									
Utah									
Salt Lake City	0	0	0	0	0	0	0	1	0
PACIFIC									
Washington									
Spokane	2	0	0	0	0	0	1	0	0
Oregon									
Portland	0	0	0	0	0	0	1	1	0
California									
Los Angeles	1	0	0	0	0	0	0	2	0
San Francisco	0	0	1	2	0	0	0	1	0

[1] Dengue, 11 cases at Charleston, S. C.

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended September 18, 1926, compared with those for a like period ended September 19, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925, and nearly 30,500,000 in 1926. The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more

than 29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below

Summary of weekly reports from cities, August 15 to September 18, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926
101 cities	68	[2] 68	[3] 72	[2] 65	[4] 70	74	92	76	[5] 95	[6] 84
New England	50	47	41	50	43	26	74	38	139	35
Middle Atlantic	73	59	63	56	61	59	89	53	83	63
East North Central	51	[2] 87	68	[2] 75	57	101	70	80	76	[7] 95
West North Central	100	83	117	81	100	66	143	75	145	95
South Atlantic	60	60	[3] 68	62	106	69	119	137	88	111
East South Central	58	21	37	57	32	42	74	104	74	[8] 116
West South Central	57	65	92	34	31	60	119	86	57	77
Mountain	74	146	166	73	305	91	194	173	[5] 217	237
Pacific	110	62	105	92	[4] 76	135	75	92	130	[9] 97

MEASLES CASE RATES

	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926
101 cities	30	[2] 41	[3] 27	[2] 27	[4] 22	25	22	26	[5] 29	[6] 28
New England	93	52	86	38	50	33	91	35	108	19
Middle Atlantic	38	27	34	15	25	17	25	11	34	10
East North Central	21	[2] 60	20	[2] 32	20	30	16	18	22	[7] 21
West North Central	6	28	4	20	6	10	4	10	8	12
South Atlantic	33	36	[3] 23	15	23	9	21	19	15	9
East South Central	5	36	11	36	0	31	0	16	5	[8] 17
West South Central	9	9	0	4	0	0	4	4	4	4
Mountain	28	18	28	27	0	36	9	100	[5] 9	73
Pacific	11	78	6	94	[4] 26	92	8	159	14	[9] 225

SCARLET FEVER CASE RATES

	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926
101 cities	51	[2] 48	[3] 45	[2] 55	[4] 54	51	51	58	[5] 60	[6] 67
New England	89	73	67	54	46	59	62	80	60	76
Middle Atlantic	23	29	27	32	30	25	31	32	46	44
East North Central	54	[2] 47	45	[2] 55	58	59	57	62	58	[7] 64
West North Central	145	119	110	133	123	131	102	93	133	129
South Atlantic	40	39	[3] 39	58	56	38	54	56	36	49
East South Central	32	36	26	62	131	57	110	109	53	[8] 127
West South Central	48	17	18	26	35	26	31	47	40	30
Mountain	65	36	28	64	74	82	37	73	[5] 161	82
Pacific	41	78	66	75	[4] 50	70	36	89	64	[9] 123

[1] The figures given in this table are rates for 100,000 population, annual basis, and not the number of cases reported Populations used are estimated as of July 1, 1925, and 1926, respectively
[2] Madison, Wis , not included
[3] Greenville, S C , not included
[4] Spokane, Wash , not included
[5] Helena, Mont , not included
[6] Racine, Wis., Covington, Ky , and Tacoma, Wash , not included.
[7] Racine, Wis , not included
[8] Covington, Ky , not included
[9] Tacoma, Wash , not included.

Summary of weekly reports from cities, August 15 to September 18, 1927—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

SMALLPOX CASE RATES

	Week ended—									
	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926
101 cities	6	[2]2	[3]8	[2]4	[4]5	2	5	2	[5]6	[6]1
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	1	1	0	0	1	0	0	0	0
East North Central	2	[2]2	8	[2]7	5	0	2	2	2	[7]0
West North Central	6	4	4	0	4	0	0	2	2	0
South Atlantic	4	6	[3]12	9	2	9	12	2	12	9
East South Central	37	5	53	0	11	10	21	0	37	[8]0
West South Central	4	0	13	9	4	4	4	0	4	4
Mountain	9	0	9	0	9	0	18	0	[5]0	0
Pacific	41	5	28	13	[4]38	13	41	16	47	[9]0

TYPHOID FEVER CASE RATES

	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926
101 cities	55	[2]41	[3]45	[2]40	[4]38	40	41	45	[5]49	[6]53
New England	31	17	26	19	29	12	34	17	29	33
Middle Atlnatic	44	34	30	39	29	34	27	34	35	55
East North Central	29	[2]17	26	[2]18	17	20	20	20	18	[7]28
West North Central	47	48	35	42	22	42	57	50	57	26
South Atlantic	104	94	[3]89	56	58	92	48	105	104	81
East South Central	168	187	163	233	168	176	226	285	194	[8]264
West South Central	128	43	106	39	167	43	70	39	159	69
Mountain	102	73	111	18	28	9	129	18	[5]85	82
Pacific	61	24	52	38	[4]29	46	28	27	28	[9]37

INFLUENZA DEATH RATES

	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926
95 cities	2	[2]3	[3]3	[2]3	2	3	4	4	[5]5	[6]4
New England	0	0	0	0	0	0	2	0	0	0
Middle Atlantic	2	1	3	3	3	2	3	4	6	3
East North Central	1	[2]3	4	[2]3	3	4	7	4	4	[7]3
West North Central	0	2	2	8	2	4	0	0	6	4
South Atlantic	0	2	[3]2	2	2	0	0	0	2	6
East South Central	11	0	5	0	0	16	5	0	5	[8]6
West South Central	10	28	15	5	5	9	5	19	10	24
Mountain	9	0	9	18	18	9	28	36	[5]19	0
Pacific	7	7	0	0	0	0	4	0	0	[9]8

PNEUMONIA DEATH RATES

	Aug 22, 1925	Aug 21, 1926	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926
95 cities	53	[2]54	[3]61	[2]48	70	51	61	51	[5]60	[6]53
New England	38	40	41	33	53	50	50	40	67	54
Middle Atlantic	65	58	65	56	84	59	68	65	61	51
East North Central	40	[2]34	50	[2]38	59	34	46	37	44	[7]41
West North Central	30	49	54	42	32	36	36	30	45	51
South Atlantic	60	86	[3]80	58	54	64	60	41	81	54
East South Central	74	36	63	47	131	52	142	42	79	[8]50
West South Central	77	71	106	76	73	52	82	104	77	123
Mountain	65	82	74	73	83	64	37	64	[5]113	118
Pacific	47	78	62	21	95	78	91	57	62	[9]57

[2] Madison, Wis, not included.
[3] Greenville, S C, not included
[4] Spokane, Wash., not included.
[5] Helena, Mont, not included
[6] Racine, Wis, Covington, Ky, and Tacoma, Wash, not included.
[7] Racine, Wis, not included
[8] Covington, Ky, not included.
[9] Tacoma, Wash, not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

PLAGUE ON VESSEL

Steamship "Zaria"—At Liverpool, England, from Lagos, Nigeria, Africa—On September 12, 1926, the steamship *Zaria* arrived at Liverpool, England, from Lagos, Nigeria, with history of two fatal cases of plague occurring on board at sea in the persons of two colored firemen. It was not ascertained whether these firemen had been ashore at African ports The steamship *Zaria* was stated to be a passenger ship and freighter plying between Liverpool and the West Coast of Africa, with stops at several African ports. On arrival at Liverpool four dead rats from the ship were found plague infected

THE FAR EAST

Report for week ended September 4, 1926—The following report for the week ended September 4, 1926, was transmitted by the far eastern bureau of the secretariat of the health section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt: Alexandria	0	0	0	0	3	0
Madagascar						
Tamatave	3	3	0	0	0	0
Majunga	8	8	0	0	0	0
British India						
Bombay	---	0	---	0	4	3
Madras	---	0	---	1	6	2
Vizagapatam	---	0	---	0	1	0
Rangoon	---	14	---	1	0	0
Siam Bangkok	0	0	3	0	5	3
China						
Amoy	0	0	38	---	0	0
Shanghai	0	0	122	19	0	0
Manchuria Harbin	0	0	46	19	0	0
Kwantung: Dairen	0	0	2	1	0	0
U S S R Vladivostok	0	0	0	0	1	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia.—Aden.
Iraq.—Basra.
British India.—Karachi, Chittagong, Cochin, Negapatam, Tuticorin.

Ceylon.—Colombo

Federated Malay States.—Port Swettenham

Straits Settlements.—Penang, Singapore

Dutch East Indies.—Batavia, Surabaya, Samarang, Cheribon, Belawan Deli, Palembang, Sabang, Makassar, Banjermasin, Tarakan, Padang, Samarinda, Pontianak, Menado

Sarawak.—Kuching

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao

Portuguese Timor.—Dilly

Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga

French Indo-China.—Saigon and Cholon, Turane, Haiphong.

China.—Hongkong

Formosa.—Keelung

Japan.—Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki

Korea.—Chemulpo, Fusan

Manchuria.—Antung, Mukden, Changchun.

Kwantung.—Port Arthur

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.

New Guinea.—Port Moresby.

New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.

New Caledonia.—Noumea

Fiji.—Suva

Hawaii.—Honolulu.

Society Islands.—Papeete

AFRICA

Egypt.—Port Said, Suez

Anglo-Egyptian Sudan.—Port Sudan, Suakin.

Eritrea.—Massaua

French Somaliland.—Jibuti

British Somaliland.—Berbera

Italian Somaliland.—Mogadiscio

Kenya.—Mombasa

Zanzibar.—Zanzibar

Tanganyika.—Dar-es-Salaam.

Seychelles.—Victoria

Mauritius.—Port Louis

Portuguese East Africa.—Mozambique, Beira, Lourenço Marques

Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

British India.—Calcutta

Dutch East Indies.—Balik-Papan

ALGERIA

Plague—Philippeville—September 7, 1926.—Under date of September 7, 1926, a case of plague was reported at Philippeville, Algeria.

BRAZIL

Leprosy—Rio Grande do Sul.—Information received under date of August 21, 1926, shows leprosy present in the State of Rio Grande do Sul, Brazil, and to be increasing in prevalence.

Smallpox—Rio de Janeiro—August 15–September 4, 1926—Smallpox continued to be reported at Rio de Janeiro, with 786 cases, 406 deaths reported for the three weeks ended September 4, 1926.

CANADA

Communicable diseases—Week ended September 18, 1926—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the week ended September 18, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal fever				3	1	1		5
Poliomyelitis				6				6
Smallpox				8		5	9	22
Typhoid fever	3	11	8	30	6	3	6	67

CHINA

Cholera—Amoy—August 8–21, 1926—During the two weeks ended August 21, 1926, 13 cases of cholera were reported at Amoy, China. The disease was stated to be present in epidemic form.

JAPAN

Summary of cholera—September 10, 1926.—A total of 35 cases of cholera has been reported in Japan to September 10, 1926. The greatest number of cases occurred in Kagakawa ken, viz, 8; in Kanagawa ken, including Yokohama, 3 cases, in Osaka, 6; in Hyogo and Ookayama kens, 7 cases each. In Wakayama ken two cases were reported, and in Hiroshima and Kochi one case each.

MALTA

Communicable diseases—August, 1926—During the month of August, 1926, communicable diseases were reported in the island of Malta as follows:

Disease	Cases	Disease	Cases
Broncho-pneumonia	4	Pneumonia	1
Chicken pox	1	Puerperal fever	3
Diphtheria	6	Trachoma	99
Erysipelas	12	Tuberculosis	14
Lethargic encephalitis	3	Typhoid fever	32
Malta fever	70	Whooping cough	6
Measles	30		

Population, civil, estimated, 223,088

UNION OF SOUTH AFRICA

Plague—Cape Province—August 14, 1926—During the week ended August 14, 1926, plague was reported present in the Cape Province, Union of South Africa, with one case, white, occurring in Calvinia District and one fatal case, native, in Maraisburg District. Both cases were on farms

Area of rodent infection—Natural defenses—Measures proposed.—The known area of plague infection in veld rodents, affecting chiefly Namaqua gerbilles (jerboa) and Cape hares, in the northwestern section of the Cape Province, has been stated to extend to the south and west as far as Calvinia and Nieuwhoudtville and thence southward along the coastal belt to the Cape Peninsula The Roggeveld and Cedarberg Mountains and the Doorn and Olifants Rivers, with their irrigation canals, form natural barriers to spread of the infection It is proposed to supplement these natural defenses by clearing of rodents a belt of country about 2 miles wide and 6 miles long between the Doorn River and Klaver, and to similarly clear of rodents the strip, to the extent of about a mile wide, between the Olifants River and the irrigation canal on the right bank, to a point beyond which the river is impassable to rodents

VIRGIN ISLANDS

Communicable diseases—August, 1926.—During the month of August, 1926, communicable diseases were reported in the Virgin Islands of the United States as follows:

Island and disease	Cases	Remarks
St Thomas and St. John		
Chancroid	9	Imported, 2, from St. Croix
Gonorrhea	9	Imported, 2—St Croix, 1, San Juan, P R, 1.
Syphilis	11	Secondary, 7, tertiary, 2, of eye, 1; cerebrum, 1
Tetanus	1	
Uncinariasis	2	Imported, 1
St Croix		
Gonorrhea	1	
Filariasis	1	Bancrofti
Leprosy	2	
Mumps	2	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended October 8, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Amoy	Aug 8-21	13		Stated to be present in epidemic form
Shanghai	Aug 15-28	12	70	Cases, foreign, deaths, foreign and native in foreign settlements and concessions
Swatow	Aug 8-14			Present Conditions improving
India				July 25-31, 1926 Cases, 1,910; deaths, 1,225
Calcutta	Aug 15-21	10	9	
Indo-China (French)				
Saigon	Aug 1-14	3		
Japan				To Sept 10, 1926 Cases, 35
Ken (Prefecture)				
Kagakawa	To Sept 10	8		
Kanagawa	do	3		Including Yokohama
Hiroshima	do	1		
Hyogo	do	7		
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Wakayama	do	2		
Philippine Islands.				
Manila	Aug 8-21	4		
Province—				
Davao	May 23-29	1		
Rizal	July 18-24	1		
Siam				Aug 1-7, 1926 Cases, 47, deaths, 38
Bangkok	Aug 1-7	8	2	For district

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Philippeville	Sept 7	1		
Greece				
Athens	Aug 1-31	9	2	Including Piraeus.
Patras	Aug 29-Sept 4	1	1	
India				July 25-31, 1926: Cases, 326, deaths, 189.
Bombay	Aug 8-14	2	2	
Madras Presidency	Aug 1-7	57	29	
Burma	Aug 15-21	11	10	
Indo-China (French)				
Saigon	Aug 1-7	1		
Java				
Batavia	Aug 6-20	14	13	
East Java and Madura	July 25-31	1	1	
Union of South Africa				
Cape Province	Aug. 8-14	1	1	
On vessel				
Steamship "Zaria"	Sept , 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa Arrived Sept 12, 1926, with history of 2 fatal cases en route, in African firemen Four dead rats on board found plague infected

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria.				
Algiers	Aug 21-31	1		
Brazil				
Bahia	Aug. 15-21	6	2	
Pernambuco	Aug 1-21	38	7	
Rio de Janeiro	Aug 22-Sept 4	786	406	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended October 8, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Canada				
Alberta	Sept 12-18	9		
Ontario	do	8		
Saskatchewan	do	5		
China				
Changsha	Aug 8-14	1		
Swatow	do			Sporadic
Egypt				
Cairo	Mar 5-Apr 1	13	3	
Great Britain				
Bradford	Aug 29-Sept 4	1		
Greece				
Athens	July 1-31	71	6	Including Piræus.
India				July 25-31, 1926 Cases, 2,357, deaths, 741
Bombay	Aug 8-14	6	4	
Calcutta	Aug 15-21	3	3	
Madras	Aug 22-28	9	4	
Java				
Batavia	Aug 6-20	2		Province.
East Java and Madoera	July 25-Aug 7	15	1	
Persia				
Teheran	May 22-June 22	1		
Portugal				
Lisbon	Sept. 5-11	1		
Siam				Aug 1-7, 1926 Cases, 12, deaths, 8
Bangkok	Aug 1-7	4	4	District
Yugoslavia				
Zagreb	Aug 9-15	2		

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	Aug 21-31	1		
Chile				
Valparaiso	Aug 22-28	2		
China				
Antung	Aug 23-29	2		
Palestine				
Haifa district	Aug 24-30	2		
Persia				
Teheran	May 23-June 22		1	

Reports Received from June 26 to October 1, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926 Cases, 31, deaths, 29
China:				
Canton	June 1-30	38	14	
Nanking	July 25-Aug. 7			Present
Shanghai	Reported July 20	35	8	
Do	July 25-Aug 14	20	257	Cases, foreign, deaths, native and foreign
Swatow	July 11-Aug 7	20	63	
Tsingtao	July 11-Aug 14	3	3	
Chosen				
Shingishu	Sept 13	19		Including places in vicinity.
French Settlements in India				Mar 7-June 26, 1926. Cases, 31; deaths, 30.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 1, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
India				Apr 25–June 26, 1926: Cases, 18,526, deaths, 11,531. June 27–July 24, 1926: Cases, 7,127, deaths, 4,362
Bombay	May 30–June 5	1	1	
Do	July 18–31	2	2	
Calcutta	Apr 4–May 29	478	418	
Do	June 13–26	73	69	
Do	June 27–Aug 14	232	206	
Madras	May 16–June 5	2	1	
Do	Aug 1–7	1	1	
Rangoon	May 9–June 26	67	44	
Do	June 27–Aug 8	28	27	
Indo-China				
Saigon	May 2–15	52	48	
Do	May 22–June 26	42	32	
Do	June 27–July 24	28	17	
Japan				
Yokohama	Aug 25	1		
Philippine Islands				
Manila	May 18–24	2	2	
Do	June 27–July 31	5	2	
Provinces—				
Albay	Apr 18–24	1	1	
Mindoro	Feb 21–Mar 6	3	3	
Romblon	Dec 14–31	42	43	
Do	Jan 2–23	16	12	
Siam				
Bangkok	May 2–June 12	1,325	736	
Do	June 20–26	56	26	
Do	June 27–July 31	69	26	
Straits Settlements				
Singapore	July 4–17	2	1	
On vessel				
Steamship Macedonia	Aug 5	1		At Yokohama, Japan. Vessel sailed from Singapore July 18, 1926

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21–30	1		Under date of July 16, 2 cases reported.
Do	July 1–20	1		
Bona	Aug 14	1		
Azores				
Fayal Island—				
Horta	Aug 2–8	1	1	
St Michaels Island	May 9–June 26	4	1	
Do	June 27–July 10	3	1	
British East Africa				
Kisumu	May 16–22	1	1	
Uganda	Mar 1–May 31	449	356	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29–June 5	1	1	
Chile				
Iquique	June 20–26		1	
China				
Amoy	Apr 18–June 26	40	30	
Do	June 27–Aug 7	28		
Foochow	June 6–July 31			Several cases Not epidemic
Nanking	May 9–Aug 7			Prevalent
Swatow	July 25–31	14		
Ecuador				January-June, 1926. Cases, 385, deaths, 154
Chimborazo	January-June	9	2	Rats taken, 766
Guayaquil	May 16–June 30	6		Rats taken, 30,914; found infected, 31
Do	July 1–Aug 31	12	3	Rats taken, 41,321, found infected, 59
Leon	January-June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2.
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua. Rats taken, 1,542.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 1, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Egypt				Jan 1-Aug 12, 1926 Cases, 115.
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 21	1	1	
France				
Marseille	July 8	1	1	Reported July 24.
St Denis	Reported Aug 2	1		Vicinity of Paris
St Ouen	Aug 14	2		Suburb of Paris
Great Britain				
Liverpool	Aug 29-Sept 4	2	1	
Greece				
Athens	Apr 1-May 31	16	4	Including Piræus
Patras	May 27-June 12	4	1	
Do	July 25-Aug. 14	6	3	
Zante	May 17	1		
Hawaii				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Paauhau	July 18-24			Plague-infected rat trapped
India				Apr 25-June 16, 1926 Cases, 53,001, deaths, 41,576 June 27-July 24, 1926 Cases, 781; deaths, 487
Bombay	May 2-June 26	16	15	
Do	July 18-31	2	2	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	162	93	
Do	July 4-31	138	64	
Rangoon	May 9-June 26	20	15	
Do	June 27-Aug 14	36	28	
Indo-China.				
Saigon	May 23-June 26	8	3	
Do	July 18-24	1	1	
Iraq				
Baghdad	Apr 18-June 12	161	108	
Do	July 18-31	2	2	
Japan:				
Yokohama	July 2-30	9	5	
Do	Aug 7	2		Total July 2-Aug 10, 1926 Cases, 9, deaths, 8.
Java				
Batavia	Apr 24-June 19	65	65	
Do	June 26-Aug 6	30	29	
Cheribon	Apr. 11-24	3	3	
East Java and Madura	June 13-19	1	1	
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Majunga Province	do	10	6	
Mananjary Province	do	1	1	
Moramanga Province	Apr. 1-15	2	2	Do
Tananarive Province				Apr 1-June 30, 1926 Cases, 130, deaths, 120
Tamatave (Port)	May 16-31	1	1	
Tananarive Town	Apr. 1-June 30	7	7	
Nigeria				Feb 1-Apr 30, 1926 Cases, 115, deaths, 92
Peru				May-June, 1926 Cases, 57, deaths, 16
Departments—				
Ancash	May 1-31			Present
Cajamarca	May 1-June 30	10	4	
Huacho	July 1-31	1		
Huaral	do	5	2	
Huarmey	do			Do
Ica	May 1-31	1		
Libertad	do	4		Pacasmayo, cases, 2, Trujillo district, cases, 2
Lima	May 1-June 30	29	12	
Do	July 1-31	8	2	
Haciendas	do	7	3	
Piura	June 1-30	13		In Huancabamba district.
Russia				Jan 1-Mar 31, 1926: Cases, 37.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 1, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Senegal				Nov 1-30, 1926 Cases, 3, deaths, 2 Mar 1-Apr 30, 1926 Cases, 15, deaths, 4
Siam				
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Do	July 4-17	1	1	
Syria				
Beirut	July 1-Aug 10	2		
Tunisia	May 11-June 30	174		
Do	July 1-20	12		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Turkey				
Constantinople	Aug 1-28	4	1	
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-July 3	1		
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—Hoopstad District—Protestpan	May 9-22	3	3	

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	14		
Do	July 1-Aug 20	2		
Belgium				
Antwerp	Aug. 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-31	2	4	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Aug 14	46	23	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-Aug. 14	18	11	
Pernambuco	July 11-31	5		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Aug 14	1,037	491	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Canada				May 30-June 12, 1926 Cases, 46.
Alberta	May 30-June 12	3		
Do	June 27-Sept 11	5		
Calgary	Sept 5-11	1		
British Columbia—Vancouver	Aug 16-22	2		
Manitoba				May 30-June 26, 1926. Cases, 24 June 27-Sept 11, 1926 Cases, 19.
Winnipeg	June 6-12	5		
Do	July 4-Sept 4	12		
Ontario				May 30-June 26, 1926 Cases, 36 June 27-Sept 11 Cases, 70
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2		
Kitchener	Apr 25-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Toronto	July 18-Aug 11	8		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 15. June 27-Sept. 11. Cases, 54.
Regina	July 4-10	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 1, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Ceylon				Mar 14-May 29, 1926 Cases, 44, deaths, 3
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Chungking	May 2-Aug 7			Present
Foochow	do			Do
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations
An-sha	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changechun	May 16-June 26	6		Do
Do	June 27-July 3	1		Do
Dairen	Apr 26-June 20	69	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do.
Harbin	May 14-June 30	21		Do
Do	July 1-28	14		
Kai-yuan	May 16-June 30	10		Do
Kungchuling	June 13-19	1		Do
Liaoyang	May 16-June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do.
Ssupingkai	May 16-June 30	2		Do
Teshihchiao	do	2		Do
Wa-feng-tien	do	3		Do
Nanking	May 8-Aug 7			Present
Shanghai	May 2-June 26	10	25	Cases, foreign deaths, population of international concession, foreign and native.
Do	June 27-July 24	3	3	
Swatow	May 9-Aug 7			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-May 31, 1926 Cases, 548, deaths, 121
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Aug 19	11	5	
Cairo	Jan 29-Mar 4	3	1	
Esthonia				May 1-June 30, 1926 Cases 3
France				Mar 1-June 30, 1926 Cases, 141
St Etienne	Apr 18-June 15	7	3	
French Settlements in India	Mar 7-June 26	282	282	
Gold Coast	Mar 1-May 31	662	13	
Great Britain				
England and Wales				May 23-June 26, 1926 Cases, 933 June 27, Aug 28, 1926 Cases, 863
Bradford	May 23-29	1		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-17	1		
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Aug 7	2		
Greece.				
Saloniki	June 1-14		3	
Guatemala:				
Guatemala City	June 1-30		2	
India				Apr. 25-June 26, 1926. Cases, 54,851, deaths, 14,771. June 27-July 24, 1926. Cases, 12,138, deaths, 3,772.
Bombay	May 2-June 26	220	134	
Do	June 27-July 31	78	41	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-26	24	18	
Do	June 27-Aug 14	27	22	
Karachi	May 16-June 26	44	18	
Do	June 27-Aug. 21	13	7	
Madras	May 16-June 26	7	4	
Do	June 27-Aug 21	29	8	
Rangoon	May 9-June 26	10	5	
Do	July 4-24	3		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 1, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Indo-China				
Saigon	May 9–June 26	2		
Iraq				
Baghdad	May 9–June 26	8	3	
Do	July 4–10	1	1	
Basra	Apr 18–June 22	34	25	
Italy				Mar 28–June 26, 1926 Cases, 34 June 27–July 10, 1926 Cases, 3
Catania	Aug 9–15	2		
Rome	June 14–20	4		Entire consular district, including Island of Sardinia
Jamaica				Apr 25–June 26, 1926 Cases, 201 (Reported as alastrim)
Do				June 27–Aug 28, 1926 Cases, 147. (Reported as alastrim)
Japan				Apr 11–June 19, 1926 Cases, 641.
Kobe	May 30–June 5	1		
Nagoya	May 16–22		1	
Do	July 4–10	1		
Taiwan Island	May 11–20	24		
Do	June 1–20	23		
Do	July 11–Aug 10	2		
Tokyo	June 26–July 17	3		
Yokohama	May 2–8	2		
Java				
Batavia	May 15–June 25	2		Province.
Do	July 24–30	1		Do
East Java and Madura	Apr 11–July 3	100	6	
Do	July 4–17	28		
Malang	Apr 4–10	6	1	Interior
Surabaya	May 16–22	14	1	
Do	July 18–24	15	1	
Latvia				Apr 1–June 30, 1926 Cases, 5
Mexico				Feb 1–Apr 30, 1926 Deaths, 982
Aguascalientes	June 13–26		5	
Guadalajara	June 8–14		2	
Do	June 29–Aug 30		6	
Mexico City	May 16–June 5	3		Including municipalities in Federal District.
Do	July 25–Aug 28	4		Do
Saltillo	July 18–24		1	
San Antonio de Arenales	Jan. 1–June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13–26		7	
Do	July 4–Sept 4		10	
Tampico	June 1–10		2	
Torreon	May 1–June 30		17	
Do	July 1–Aug 31		9	
Netherlands				
Amsterdam	July 18–24		9	
Nigeria				Feb 1–Apr. 30, 1926. Cases, 404; deaths, 33.
Persia				
Teheran	Apr 21–May 21		7	
Peru				
Arequipa	June 1–30		1	
Poland				Mar 28–May 1926 Cases, 12; deaths, 1 June 27–July 24, 1926· Cases, 2; deaths, 1
Portugal				
Lisbon	Apr 26–June 19	10	3	
Do	July 11–Aug 22	20	6	
Oporto	May 23–June 5	4		
Do	July 11–24	2		
Russia				Jan 1–Mar. 31, 1926 Cases, 2,103
Siam·				
Bangkok	May 2–June 12	23	20	
Do	July 4–31	39	35	
Spain				
Valencia	Aug 22–28	1		
Straits Settlements				
Singapore	Apr 25–May 1	1		
Do	July 11–17	1		
Switzerland.				
Lucerne Canton	June 1–30	1		
Do	July 1–31	2		
Tripolitania	Apr 1–30	11		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 1, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Tunisia				Apr 1–June 30, 1926 Cases, 17.
Tunis	Aug. 11–20	2		
Union of South Africa	June 1–30	8	1	
Cape Province	June 20–26			Outbreaks.
Idutva district	May 23–29			Do.
Orange Free State	June 20–July 3			Do.
Natal	May 30–June 5			Do.
Transvaal				June 6–12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Johannesburg	May 9–June 12	5		
Do	July 11–17	1		
Yugoslavia				Apr 15–30, 1926. Cases, 2, deaths, 1
On vessel:				
S S Karapara				At Zanzibar, June 7, 1926, One case of smallpox landed. At Durban, Union of South Africa, June 16, 1926. One suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada. Patient from Glasgow, removed at quarantine on outward voyage.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21–June 30	7	1	
Do	Aug. 1–10	1		
Argentina.				
Rosario	Feb 1–28	2		
Bolivia				
La Paz	June 1–30		1	
Bulgaria				Mar 1–June 30, 1926. Cases, 87, deaths, 14
Chile:				
Antofagasta	May 23–June 26	4		
Do	June 27–July 3	1		
Concepcion	June 1–7		1	
Valparaiso	Apr. 29–May 5		1	
Do	Aug 14–21	1		
China				
Antung	June 14–27	7	1	
Do	June 28–Aug. 15	24	1	
Canton	May 1–31	1		
Ichang			1	Reported May 1, 1926. Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1–May 31, 1926. Cases, 887, deaths, 91
Chemulpo	May 1–June 30	38	2	
Do	July 1–31	7	2	
Gensan	June 1–30	1		
Seoul	do	8	3	
Do	July 1–31	7		
Czechoslovakia				Jan 1–June 30, 1926. Cases, 156; deaths, 6
Egypt				
Alexandria	July 16–Aug. 19	3		
Cairo	Jan 29–Mar 4	74	17	
Do	July 23–Aug 5	1		
Port Said	June 4–24	4	1	
Do	July 9–Aug. 19	4	1	
Great Britain:				
Scotland—				
Glasgow	July 30–Aug 21	9	1	
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30–June 5	1		
Do	June 27–July 3	1	1	
Cork	June 5	1		
Kerr County—				
Dingle	June 27–July 3	1		
Italy				Mar 28–May 8, 1926. Cases, 3.
Japan				Mar 28–May 29, 1926. Cases, 37.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 1, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Latvia				May 1-June 30, 1926 Cases, 19
Lithuania				Mar 1-June 30, 1926 Cases, 199, deaths, 22
Mexico				Feb 1-Apr 30, 1926 Deaths, 110
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal district
Do	June 13-19	9		Do
Do	July 25-31	3		Do
Do	Aug 15-Sept 4	15		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-June 30, 1926 Cases, 426
Palestine				Mar 1-June 30, 1926 Cases, 14, deaths, 1 Aug 10-16, 1926 Cases, 2
Gaza	July 6-12	1		
Haifa	July 13-Aug 23	3		
Halelal	Aug 17-23	1		
Jaffa district	June 15-28	5		
Majdal district	July 13-Aug 2	2		
Nazareth district	do	3		
Tiberias	Aug 3-9	1		
Yavniel	Aug 17-23	1		
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85 June 27-July 24, 1926 Cases, 147, deaths, 11
Rumania				Mar 1-May 31, 1926 Cases, 711, deaths, 69.
Russia				Jan 1-Mar 31, 1926 Cases, 14,814
Tunisia				Apr 1-June 30, 1926 Cases, 110
Tunis	June 11-30	3		
Turkey				
Constantinople	June 16-22	1		
Union of South Africa				Apr. 1-May 31, 1926 Cases, 153, deaths, 19
Cape Province				Apr 1-June 30, 1926 Cases, 202, deaths, 24 native
Glengray district	June 27-July 3			Outbreaks
Grahamstown	do	1		
Natal				Apr 1-June 30, 1926 Cases, 28 July 25-31, 1926 Cases, 11. In native compounds
Durban	July 25-Aug 7	9	1	
Orange Free State				Apr 1-June 30, 1926 Cases, 24; deaths, 4.
Do	July 18-24			Outbreaks
Transvaal				Apr 1-June 30, 1926 Cases, 10, deaths, 5 Aug. 1-7, 1926 Outbreaks
Walkkerstroom district	June 20-26			Outbreaks.
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 48, deaths, 7 July 1-31, 1926. Cases, 2, deaths, 1
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr 1-May 31	6	3	

X

TREASURY DEPARTMENT

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SPECIAL ARTICLES

Death Rate from Tuberculosis Decreasing

Court Decisions Relating to Public Health

The Notifiable Diseases in Small Cities, 1925

WASHINGTON
GOVERNMENT PRINTING OFFICE
1926

UNITED STATES PUBLIC HEALTH SERVICE.

HUGH S. CUMMING, *Surgeon General.*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C. C PIERCE, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912

They contain (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world (2) Articles relating to the cause, prevention, or control of disease (3) Other pertinent information regarding sanitation and the conservation of the public health

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PUBLIC HEALTH REPORTS

VOL. 41 — OCTOBER 15, 1926 — NO. 42

DEATH RATE FROM TUBERCULOSIS DECREASING

Lower death rates from tuberculosis (all forms) were registered in 1924 than in 1900, for each age period for both sexes, in the Registration States of 1900, as shown by figures recently issued by the Department of Commerce. The amount of this decline in death rates ranged from 73 per cent for females under 1 year of age to 37 per cent for females aged 15 to 19 years. Specific rates per 100,000 population at each age period are given in the accompanying table.

This decline in tuberculosis death rates is not limited to the United States Similar declines are recorded in the death rates of England and Wales. A comparison of the 1924 death rates from tuberculosis (all forms) for England and Wales with the corresponding 1924 rates for the United States Registration States of 1900 reveals lower rates in the United States for each age period up to age 55 for each sex The greatest per cent difference up to age 55 was for males aged 5 to 9 years, the respective rates for the two countries being 37 for England and Wales and 15 for the United States, the latter rate being 59 per cent lower than the rate for England and Wales The least per cent difference up to age 55 was for females aged 20 to 24, the respective rates for the two countries being 153 for England and Wales and 146 for the United States, the latter rate being 19 per cent lower than the rate for England and Wales Comparisons of the tuberculosis death rates for the two countries for ages above 55 show much lower rates in England and Wales than in this country, so much lower in fact that apparently the only explanation is a tendency in England and Wales to certify at the older ages bronchitis as the cause of death instead of tuberculosis.

Death rates for tuberculosis, by sex and age groups, in the registration States of 1900

Age period	Death rate for tuberculosis (all forms) per 100,000 population in the registration States of 1900							
	1900		1910		1920		1924	
	Male	Female	Male	Female	Male	Female	Male	Female
All ages—								
Adjusted rate	194.4	182.8	173.5	141.2	114.5	101.7	89.7	77.2
Crude rate	201.9	188.5	184.0	146.2	121.8	103.7	95.4	78.0
Under 1 year	349.5	294.8	250.9	249.3	152.0	127.8	94.4	78.7
1 to 4 years	109.0	98.0	109.6	95.5	66.7	56.2	42.6	40.2
5 to 9 years	31.1	33.5	29.2	33.4	22.4	21.5	14.8	15.0
10 to 14 years	27.4	55.0	25.3	46.3	18.3	33.5	14.9	21.7
15 to 19 years	124.1	177.7	111.1	133.0	79.0	131.6	63.4	111.6
20 to 24 years	249.7	265.8	190.9	204.0	137.9	179.4	123.0	145.7
25 to 29 years	286.6	312.4	224.8	219.6	151.2	164.5	118.1	124.0
30 to 34 years	298.3	282.0	263.0	208.9	163.3	138.0	121.5	104.7
35 to 44 years	279.8	230.3	284.0	182.5	171.4	120.5	133.5	82.5
45 to 54 years	257.0	175.0	263.0	137.8	179.3	89.8	137.9	68.0
55 to 64 years	269.1	180.2	251.8	138.2	170.2	91.5	145.9	69.6
65 to 74 years	284.1	232.8	227.0	166.2	163.4	103.4	135.7	88.5
75 years and over	276.0	267.6	183.0	168.1	122.7	103.2	90.8	78.2

Comparison of tuberculosis death rates for the United States and England and Wales for 1924

Age period	Death rate for tuberculosis (all forms) per 100,000 estimated population in 1924—			
	The United States Registration States of 1920		England and Wales[1]	
	Male	Female	Male	Female
All ages—				
Adjusted rate	92 1	86 9	115 6	93 4
Crude rate	95.6	87 1	120 2	[illegible]
Under 1 year	86 8	74 7	114 2	[illegible]
1 to 4 years	36 9	32 6	103 6	[illegible]
5 to 9 years	12 7	13 9	36.5	36 7
10 to 14 years	14 6	23 8	32 0	53 5
15 to 19 years	63 2	112 7	82 3	127 3
20 to 24 years	127 0	167 8	151 2	152.0
25 to 29 years	131 4	142 5	150 4	136 3
30 to 34 years	129 8	118 4	148 6	117 8
35 to 44 years	131 1	97 0	170 4	99 3
45 to 54 years	133 6	82 2	172 4	76 0
55 to 64 years	144 9	84 2	143 6	65 7
65 to 74 years	165 1	115 7	102 2	54 4
75 years and over	136 2	120 9	33 5	34 4

[1] From Statistical Review for 1924, compiled by Registrar General of England and Wales

PUBLIC HEALTH ENGINEERING ABSTRACTS

Housing Methods and Death Rate Variations Correlate. *The Nation's Health*, Vol. 8, No 6, June 15, 1926, pp. 425–426. (Abstract by A L Dopmeyer.)

In this short article are analyzed the results of a study by Dr. A. K Chalmers (*Proc. Roy Soc. Med*, March, 1926, pp. 13–22) to determine the probable effects on the health of the community produced by living in tenements as compared to cottages The comparison is made between England and Scotland, the general practice of the people of England in the past having been to live in cottages, and that of the people of Scotland to live in tenements.

According to Doctor Chalmers, dwellers in tenements in Scotland show a much higher death rate, particularly from communicable diseases, than people living in cottages in England; in fact, Scotland shows a higher death rate for each sex at all ages A table shows comparative death rates between Scotland and England, and a specific comparison is made between Manchester, a "city of cottages," and Glasgow for the years between 1914–1922.

Incidentally, England is said to be attempting to relieve its housing shortage by building tenements and Scotland by building cottages, in each case, the method of housing of which the nation knows least.

Pollution of Water Supplies By Wastes from Canneries and Dairies in Iowa. J. H. Buchanan, Associate Professor of Sanitation Chemistry, Iowa State College, Ames, Iowa. *Journal American*

Water Works Association, Vol. 15, No 5, May, 1926, pp 527–530. (Abstract by Sol Pincus)

The stream-pollution problem of Iowa has become serious owing to the centralization of manufacturing plants producing organic wastes, particularly in the corn-canning industry and in the dairy industry It is pointed out that the corn-canning and creamery wastes differ from domestic sewage, as the fermentation of considerable quantities of carbohydrates in the former wastes results in very markedly increasing the acidity of the streams. Instances are given in which the corn-canning waste effected an increase of acidity in the stream of nearly one hundred fold. With the creamery wastes the effect of increase of acidity is also encountered, as well as a great increase in organic matter

The increase in acidity would be an important factor in the suitability of a stream for public water-supply purposes, on account of the corrosive nature of the acid water and the difficulty that would be experienced in the chemical process of purification

Schenectady Sewage-Treatment Plant Markets Its Sewage Sludge. Anon *Health News*, New York State Health Department, Vol 3, No. 22, May 31, 1926. p. 86 (Abstract by Isador W Mendelsohn)

In little over a year 2,500 cubic yards of dried Imhoff tank sludge from the Schenectady (N Y) sewage-disposal plant has been sold to the farmers of the county at 10 to 25 cents per load at the plant The farmers cart the material in trucks and farm wagons, the average haul being 6 miles, the longest 14 All types of crops were benefited and equal success was reported on both sandy and clayey soils.

The plan for selling the sludge is very interesting and can be adapted to other places. It included (1) advertisement of the fertilizer value of the sludge by the local farm bureau association in the local press and the farm bureau periodical; (2) form letters mailed by the bureau to its members; (3) exhibits at meetings of market gardeners; (4) spread of results of analysis of sludge samples by Cornell University among farmers.

COURT DECISIONS RELATING TO PUBLIC HEALTH

City, not county, held liable for expense of free vaccination.—(Michigan Supreme Court; Keho et al. *v.* Board of Auditors of Bay County, 209 N. W. 163; decided June 7, 1926) To prevent the spread of smallpox in Bay City, the plaintiffs, who were physicians constituting the board of health of the city, vaccinated approximately 10,000 school children, teachers, and janitors. Their bills were presented to the county board of auditors and disallowed because the auditors were of the opinion that the county was not liable. The circuit

court affirmed the auditors' action and on appeal to the supreme court the judgment of the circuit court was affirmed. The decision of the supreme court was based on section 5096 of the Compiled Laws, 1915, which provided that "the board of health of each city * * * may at any time direct its health officer or health physician to offer vaccination * * * with bovine vaccine virus * * * to every child and to all other persons, without cost to the person vaccinated * * * but at the expense of such city * * *."

Meat ordinance construed—(Colorado Supreme Court; Burtis *v.* City of Montrose, 247 P. 186; decided May 10, 1926.) A city ordinance prohibited any person from selling, or keeping or offering for sale, any meat not inspected by the city inspector, unless the meat bore the meat inspection brand or mark of the United States Department of Agriculture. The ordinance also fixed the charges for inspection The supreme court held that, where the meat handled by a person had been inspected and marked by the Federal Government, such person was expressly exempted from the payment of any inspection fee provided by the ordinance.

Tort action against Washington Suburban Sanitary Commission held not maintainable.—(District of Columbia Court of Appeals; Washington Suburban Sanitary Commission *v.* Magruder, 12 F. (2d) 832; decided May 3, 1926) The plaintiff in the lower court brought an action for damages against the Washington Suburban Sanitary Commission for personal injuries alleged to have been caused through the negligence of the defendant in constructing and laying a sewer. The court of appeals held that the action could not be maintained because the commission was a governmental agency created by a Maryland law and was without funds or power to raise same for the purpose of paying damages

Commitment of drug addicts under certain statute not warranted.—(New York Supreme Court; People ex rel. Sherwood et al. *v.* City of Buffalo et al., 216 N. Y. S. 468; decided March, 1926.) Where there was no statute making the use of habit-forming drugs unlawful, the supreme court held that the Buffalo city court could not commit persons to a hospital under a statute authorizing such commitment "for unlawfully using" habit-forming drugs. The court also held that such statute did not make the use of habit-forming drugs unlawful.

Migratory livestock act held unconstitutional—(Colorado Supreme Court; People *v.* Morgan, 246 P 1024; decided May 24, 1926.) The migratory livestock act of 1925 provided that "whenever any migratory livestock is driven into or pastured or suffered to range or graze in this State from an adjoining State, the owner thereof or his agent shall 10 days before crossing the State line notify the sheriff of the county into which such entry is made of such entry," and also

required the inspection of such livestock for communicable diseases. The collection of a certain fee for each animal was also prescribed. In a prosecution for a violation of the act, the supreme court in its opinion stated in part as follows:

Section 6 of the above act of the legislature provides, among other things, that it does not affect livestock owned by residents of this State which are ranged a portion of the year in adjoining States, or which are taken for shipment back into this State By sections 1, 2, and subsequent sections, the act is made to apply to migratory livestock driven into, or suffered to range or graze in, this State from adjoining States. In other words, one rule is made for residents of Colorado and another for nonresidents If inspection is necessary for the one, it is necessary for the other.

The above discrimination is repugnant to clause 1, section 2, article 4, of the Constitution of the United States, which entitles the citizens of each State to all privileges and immunities of citizens in the several States It is also contrary to that part of section 1 of the fourteenth amendment to the Constitution of the United States which forbids any State from making or enforcing any law abridging the privileges and immunities of the citizens of the United States.

The court held the entire act to be invalid

Enjoining of enforcement of slaughterhouse ordinance refused.—(Texas Court of Civil Appeals, City of Wichita Falls *v.* Roberson, 283 S W 870, decided March 6, 1926) The plaintiff in the lower court sought to enjoin the enforcement of an ordinance of the city of Wichita Falls relating to slaughterhouses. The ordinance was very detailed and regulated the construction, equipment, and sanitation of slaughterhouses, required the medical examination of employees, and prohibited the use or sale as food of any animal not slaughtered at a place such as prescribed by the ordinance. Other provisions relating to the subject were also contained in the ordinance. The court of civil appeals refused to grant the injunctive relief asked for, and stated as follows in the opinion:

We conclude that it can not be said that the ordinance invoked in this case, as a whole, is void or violative of any constitutional provision invoked, or that plaintiff's petition or the facts proven on the trial come within any exception to the general rule which denies equitable relief from the enforcement of a criminal statute.

Inspection fees, applicable to private meat markets and imposed by city ordinance, held excessive.—(Louisiana Supreme Court; City of Baton Rouge *v.* Sanchez, 108 So. 552; decided May 3, 1926.) An ordinance of the city of Baton Rouge provided, among other things, for the inspection of private meat markets and fixed the fees for such inspection at a certain amount for each animal, the amount varying with the kind of animal. The fees were on a daily basis, while the markets were inspected about twice a month. The defendant, the owner and operator of a private meat market, refused to pay an amount assessed against him in accordance with the schedule of fees contained in the ordinance, and the city brought suit to recover

the same. The legality of the ordinance was attacked on the ground that the fees, if construed as either a license or a tax, exceeded the maximum limits provided by the State constitution, and also on the ground that the fees were arbitrary, excessive, and exorbitant, and in no way related to the cost of inspection, but were in restraint of trade and an attempt on the part of the city to raise revenue under the guise of the police power. The evidence showed that the fees and charges assessed against the defendant, on a per annum basis, were far in excess of all of his State and parish taxes and licenses. The supreme court decided in favor of the defendant, and the ordinance, in so far as it attempted to impose the stated fees on private meat markets, was annulled. The following are portions from the court's opinion:

We would not be disposed to interfere with the exercise of the discretion vested in the council and to declare the ordinance illegal if it was made to appear that the fees demanded were for regulatory and inspection purposes, even though the city did incidentally derive a small revenue from such fees over and beyond the amount required to cover the cost and expense incident to the regulation and inspection of the markets

But the fees exacted under the ordinance are so patently out of proportion to, and so obviously in excess of, the amount necessary to meet the expense and cost of the service contemplated, that we are constrained to hold that the city went beyond its police power of regulation and that the exactions demanded constitute a source of revenue, are within the term "license or tax," and exceed the constitutional limitation

Town ordinance held valid in so far as making it unlawful to permit certain animals to pollute stream used as water supply.—(Utah Supreme Court, Town of Ophir *v* Ault, 247 P. 290; decided June 4, 1926.) One of the provisions of an ordinance of the town of Ophir made it unlawful to permit any cattle, horses, sheep, goats, or hogs to pollute any stream of water, used by the inhabitants of the town, anywhere within 10 miles above a point where said water was first taken by the town for domestic purposes. The defendant was charged with violating the above ordinance in that he permitted his sheep to pollute a stream used by the inhabitants of the town as a water supply and of which stream the town was part owner. The supreme court held that the town had statutory authority to enact an ordinance for the protection of its water supply, and that the ordinance in question was valid as far as the offense charged was concerned. The conviction of the defendant in the lower court was affirmed by the supreme court.

Occupational disease held not compensable under workmen's compensation act.—(Texas Commission of Appeals, Section B; Aetna Life Ins. Co. *v.* Graham et al, 284 S W. 931, decided June 9, 1926.) As a result of continued exposure to gases, fumes, etc., incident to her work, an employee of a shoe polish manufacturing company

contracted tuberculosis and died therefrom. In an action for compensation under the workmen's compensation act, the commission of appeals was of the opinion that recovery could not be had for an occupational or industrial disease The commission held that the employee in the instant case had suffered no accidental injury, and that, therefore, the claim was not compensable The commission recommended that judgment be rendered denying compensation, and the supreme court entered judgment as recommended.

THE NOTIFIABLE DISEASES

PREVALENCE DURING 1925 IN CITIES OF 10,000 TO 100,000 POPULATION

The tables shown on the following pages were compiled from data furnished by the health officers of cities. Requests for information were sent to all cities of the United States having 10,000 population or more. The data for cities having more than 100,000 population were published in the PUBLIC HEALTH REPORTS, volume 41, No. 38, September 17, 1926.

The following is a list of the diseases included.

Anthrax
Cerebrospinal fever.
Chicken pox.
Dengue.
Diphtheria.
Influenza
Lethargic encephalitis.
Malaria.
Measles.
Mumps.
Pellagra.
Pneumonia (all forms).
Poliomyelitis (infantile paralysis).
Rabies in animals
Rabies in man
Rocky Mountain spotted fever.
Scarlet fever
Septic sore throat
Smallpox
Tuberculosis (all forms and pulmonary)
Typhoid fever.
Typhus fever.
Whooping cough.

The present article contains reports from cities having between 10,000 and 100,000 population. It is believed that practically all of these cities are included which have records of morbidity from communicable diseases which are of value for statistical purposes.

The populations given and which were used in computing the rates were estimated as of July 1, 1925. Estimates of population by the Bureau of the Census are based upon the assumption that the annual increase in the population of any city since 1920 is equal to the increase between 1910 and 1920 as shown by the returns of the two Federal censuses. This method gives an estimate which is approximately correct for most of the cities In a few cases, however, where there is reason to believe that the results thus obtained are far from correct, no estimate is made. The number of cases and

deaths occurring from each disease in these cities is given but no rates are computed.

The estimated expectancy, given in the tables for some of the diseases, is the result of an attempt to ascertain from the experience of recent years how many cases of the disease under consideration might be expected in 1925 In most instances the estimated expectancy is the median number of cases reported by the city for the years 1918 to 1924, inclusive When several epidemics have occurred during these years, or when for other reasons the median is not satisfactory, epidemic years are excluded, and the estimated expectancy is the mean of the number of cases reported for the nonepidemic years. The aim has been to ascertain how many cases of each disease may reasonably be expected in the absence of epidemics

The column headed "Number of years" shows the number of years for which data are available for each city.

In comparing the figures for 1925 with the estimated expectancy, averages, or with reports for preceding years, it should be borne in mind that there has been a gradual improvement in the reporting of communicable diseases during the last few years. An increase in the number of cases reported may be due to better reporting of the particular disease rather than to an increase in the number of cases existing.

In studying these tables it should be kept in mind that a relatively large number of reported cases of a communicable disease as indicated by a high case rate (and more especially when accompanied by a relatively small number of deaths, as indicated by a low fatality rate) usually means that the health department of that city is active and that the cases of the disease are being well reported by the practicing physicians It does not usually mean that the disease is more prevalent in that city than in other cities. A high fatality rate may mean that the disease was unusually virulent in a city, that the physicians did not treat the disease in that city with the success usual elsewhere, or that the practicing physicians did not report all of their cases to the health department On the other hand, an unusually low fatality rate may be due to the fact that the disease in the city was unusually mild, that the physicians treated it with unusual success, that the practicing physicians reported their cases satisfactorily, or that the registration of deaths was incomplete or the assignment of the causes of death inaccurate.

Cities which did not report either cases or deaths of a certain disease in 1925 are not included in the table for that disease.

Reported Prevalence for the Year 1925

ANTHRAX

City	Cases reported, 1925	Deaths registered, 1925
California		
Riverside	1	0
Connecticut		
New London	1	1
Louisiana		
Lake Charles	1	0
Maine		
Biddeford		1
Massachusetts		
Haverhill	1	1
Woburn	1	0
Minnesota		
Rochester	[1] 2	
Mississippi		
Natchez	1	1
New Hampshire		
Claremont		1
New York		
Amsterdam	3	1
Gloversville	3	0
South Dakota		
Aberdeen	[1] 1	
Texas		
Orange	2	1

[1] Nonresidents

CEREBROSPINAL FEVER[1]

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Alabama								
Mobile	66,000	6	1	1	0.02	1	0.02	100.0
Arkansas								
Little Rock	74,200	6	2	3	.04	2	.03	66.7
California								
Bakersfield	23,500	7	3			2	.09	
Berkeley	66,200	7	1	2	.03	0		
Fresno	58,500	3	2	4	.07	2	.03	50.0
Sacramento	72,300	7	2	2	.03	1	.01	50.0
Santa Monica	19,400					3	.15	
Colorado								
Pueblo	43,800	4	1			3	.07	
Trinidad	11,000					1	.09	
Connecticut								
Greenwich	25,300	7	0	2	.08	0		
Manchester	21,000	5	0	1	.05			
New Britain	68,000	5	8	3	.04	0		
Stratford	16,100	3	1	1	.06	0		
Florida								
St Petersburg	26,800			3	.11	0		
Tampa	94,700					3	.03	
Georgia								
Augusta	55,200	5	1	3	.05	2	.04	66.7
Savannah	93,100	6	2	1	.01	1	.01	100.0
Idaho								
Pocatello	18,200	4	1	1	.05	1	.05	100.0
Illinois								
Berwyn	18,900	3	0	5	.26	5	.26	100.0
Blue Island	13,200	3	1	1	.08	1	.08	100.0
Chicago Heights	22,100	4	2			3	.14	
Galesburg	24,800	6	1	1	.04	1	.04	100.0
Kewanee	19,700	4	1	4	.20	2	.10	50.0
Maywood	14,200	6	0	1	.07	1	.07	100.0
Murphysboro	12,500	2	1			5	.40	
Oak Park	51,400			1	.02	1	.02	100.0
Ottawa	11,500	4	0	2	.17	1	.09	50.0
Peoria	81,600	5	1	4	.05	0		
Rockford	76,500	6	2	1	.01	1	.01	100.0
Springfield	63,900	6	2	3	.05	3	.05	100.0
Waukegan	22,000			1	.05	1	.05	100.0

[1] Epidemic cerebrospinal meningitis, meningococcus meningitis.

Reported Prevalence for the Year 1925—Continued

CEREBROSPINAL FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Indiana								
East Chicago	45, 600					1	0 02	
Fort Wayne	97, 800	6	2			2	02	
Hammond	50, 100					5	10	
Kokomo	36, 900	7	1	1	0 03	0		
Newcastle	17, 000			3	18	3	.18	100 0
Richmond	30, 500	4	0	1	03	0		
Terre Haute	71, 100	6	1	2	03	0		
Kansas								
Arkansas City	14, 000			1	07	1	07	100 0
Fort Scott	11, 800	5	1	1	08	1	08	100 0
Hutchinson	26, 000			1	04			
Leavenworth	20, 900	7	1	1	05			
Parsons	14 800	4	2			2	14	
Pittsburg	19, 200					1	05	
Wichita	88, 400	6	5	4	05	3	03	75 0
Kentucky								
Henderson	12, 600	2	0			2	16	
Newport		5	2	1		1		100 0
Louisiana								
Lake Charles		3	0	1		0		
Shreveport	57, 900	2	1			[1] 10	17	
Maine								
Auburn	18, 100	3	2	1	06	0		
Bangor	26, 600	3	5	2	08	1	04	50 0
Bath	17, 800	3	1	1	06	0		
Biddeford	18, 500	4	1	1	05	1	05	100 0
Lewiston	34, 900	4	3			13	37	
Portland	75, 300	5	0	1	01	1	01	100 0
Massachusetts								
Adams	13, 500	6	1	1	07	1	07	100 0
Chelsea	47, 200			4	08	1	02	25 0
Easthampton	11, 600	5	0			1	09	
Everett	42, 100	7	2	2	05	0		
Greenfield	15, 200	5	1			2	13	
Haverhill	49, 200	6	3	3	06	3	06	100 0
Holyoke	60, 300	6	2	2	03	1	02	50 0
Lawrence	93 500	7	6	3	03	2	02	66 7
Leominster	22, 100	6	2	2	09	2	09	100 0
Malden	51, 800	7	2	2	04	1	02	50 0
Medford	47, 600			5	11	0		
Melrose	20, 200	7	0	1	05	1	05	100 0
Milton		1	1	2				
Newburyport	15, 700	7	1	1	06	0		
North Adams	22, 700	6	1	2	09	2	09	100 0
Northampton	24, 100	7	1	[1]3	12	2	08	66 7
Northbridge	10, 100	6	0			2	20	
Salem	42, 800	7	2	4	09	1	02	25 0
Somerville	99, 000	7	2	2	02	0		
Winthrop	16, 200	7	0	1	06	0		
Michigan								
Cadillac		3	0	1		1		100 0
Hamtramck	81, 700			5	06	3	04	60 0
Highland Park	72, 300	7	7	4	06	3	04	75 0
Ironwood	17, 400			2	11	1	06	50 0
Ishpeming		6	1	2		2		100 0
Kalamazoo	53, 600	7	3	3	06	2	04	66 7
Muskegon	43, 100			6	14	5	.12	83 3
River Rouge				1		1		100 0
Saginaw	72, 100					3	04	
Sault Ste Marie		7	1	1		0		
Minnesota								
Virginia	16, 000			1	06	1	06	100 0
Mississippi.								
Natchez	13, 100			4	.31	4	31	100. 0
Missouri:								
Moberly	13, 900	3	2	1	.07	0		
Montana.								
Butte	42, 900			6	.14	6	.14	100. 0
Missoula				1		1		100. 0

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

CEREBROSPINAL FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Nebraska								
Grand Island	15,600	7	1	1	0 06			
Lincoln	60,900	6	1			4	0 07	
North Platte	13,700	2	2	2	16			
Nevada								
Reno	12,700	7	0	3	24	2	.16	66 7
New Hampshire								
Portsmouth	14,900	7	0	1	07			
New Jersey								
Carteret	14,000					2	14	
Dover		2	0	1		1		100 0
Harrison	16,400	7	0	2	.12			
Montclair	32,900	5	3	3	09	3	09	100 0
New Brunswick	38,000	6	2	2	05	0		
Orange	35,400	5	1	1	03	1	03	100 0
Passaic	69,000					6	09	
Ridgefield Park		2	0	1				
New Mexico								
Albuquerque	21,000	2	2	2	10	0		
New York								
Amsterdam	35,300	3	2	2	06	2	06	100 0
Elmira	48,400	3	3			10	21	
Freeport						1		
Hudson	11,800	5	0	1	08	0		
Lackawanna	20,200	5	2	7	35	1	05	14 3
Middletown	20,400	5	1			2	10	
Mount Vernon	50,400	7	1	1	02	0		
New Rochelle	44,200	5	2			4	09	
Newburgh	30,400	5	1	1	03	0		
Niagara Falls	57,000	6	4	3	05	0		
North Tonawanda	17,400	6	0	3	17	2	11	66 7
Schenectady	92,800	7	3	2	02	1	01	50 0
Troy	72,200	6	2	3	.04	2	.03	66.7
White Plains	27,400	7	1	1	04	0		
North Carolina.								
Greensboro	47,100	2	0	1	02	1	02	100 0
High Point	23,600	1	1			9	38	
New Bern	12,200			1	08	1	08	100.0
Raleigh	30,400	5	2	1	03	0		
Salisbury	17,700	3	0	1	06	1	06	100.0
Winston-Salem	69,000	4	2	2	03	2	03	100 0
Ohio								
Ashtabula	25,100	5	1	1	04	0		
Bellefontaine				1		0		
Chillicothe	16,600	7	0	1	06	1	06	100 0
Findlay	18,200	2	0	1	05	1	05	100 0
Lorain	43,300			1	.02	1	02	100 0
Marietta	15,300			4	26	0		
Martins Ferry	15,500					7	.45	
Steubenville	32,000	5	2	2	.06	0		
Oklahoma								
Ardmore	17,200			2	.12	0		
Guthrie	11,800					5	42	
Okmulgee	25,300	1	6	5	.20	5	.20	100 0
Oregon								
Eugene	11,400					2	.18	
Pennsylvania								
Bradford	15,800	6	1			1	06	
Harrisburg	83,400	7	1	1	01	0		
McKeesport	49,100	5	2	2	.04	1	02	50 0
Pottstown	18,500					1	05	
Sunbury	16,800	6	0			1	06	
Uniontown		6	0	4		3		75.0
Washington	23,000	5	1	2	.09			
Wilkes-Barre	77,600					5	.06	
Woodlawn	18,900	5	0			2	11	
York	49,100	6	1	2	.04	2	04	100.0
Rhode Island								
Pawtucket	69,800	3	2	1	01	0		
Woonsocket	49,700					11	22	
South Carolina								
Charleston	73,100			3	.04	2	.03	66.7
Greenville	27,300	4	2	2	07	0		
Tennessee								
Chattanooga	66,600	2	2	4	06			

Reported Prevalence for the Year 1925—Continued

CEREBROSPINAL FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Texas								
Beaumont	50,000			3	0 06	2	0 04	66 7
Galveston	48,400			1	02	1	02	100 0
San Angelo						3		
Tyler	13,000	7	0	2	15	0		
Waco	43,900					4	09	
Utah								
Logan		1	0	1		0		
Ogden	36,900	5	2	1	03	1	03	100 0
Provo	11,200			1	.09	0		
Vermont								
Burlington	24,100	6	1			1	.04	
Virginia								
Danville	23,000					5	.22	
Newport News	47,100					1	02	
Portsmouth	59,000	5	1			1	.02	
Washington								
Aberdeen	16,200	5	1	4	.25	4	25	100 0
Bremerton		2	2	3		2		66 7
West Virginia								
Bluefield	19,300	[illegible]	2	2	10	2	10	100 0
Charleston	49,000			1	.02	1	.02	100.0
Martinsburg	13,500	4	0			6	44	
Morgantown	13,800	2	0			2	.14	
Wisconsin								
Racine	67,700	6	1	2	.03	2	03	100 0
Wyoming								
Cheyenne	15,500			3	.19	3	.19	100 0

CHICKEN POX

City	Estimated population, July 1, 1925	Average, 1922–1924		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama								
Anniston	20,500	3	21	21	1 02	0		
Dothan	14,500	2	34	16	1 10	0		
Florence	12,700	1	3	25	1 97	0		
Mobile	66,000	2	41	23	.35	0		
Montgomery	46,500	2	137	60	1 29	0		
Tuscaloosa	13,100			15	1.15	0		
Arizona								
Phoenix	38,700	2	14	17	.44	0		
Tucson	26,700	3	13	20	.75	3	11	6 7
Arkansas								
Hot Springs				55				
Little Rock	74,200	3	59	27	36	0		
California								
Alameda	31,900	3	166	143	4 48	0		
Alhambra		2	101	65		0		
Bakersfield	23,500	3	16	10	43	0		
Berkeley	66,200	3	439	279	4.21	0		
Chico		2	15	2				
Eureka	13,500	3	68	53	3 92	0		
Fresno	58,500	2	50	178	3 04	0		
Glendale	21,300	3	177	295	13 85	0		
Long Beach	91,200	3	243	418	4 58	0		
Pasadena	56,700	3	456	456	8.04	0		
Pomona	15,400	3	83	79	5.13	0		
Richmond	22,500	3	4	9	.40	0		

Reported Prevalence for the Year 1925—Continued

CHICKEN POX—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
California—Continued								
Riverside		3	164	139		0		
Sacramento	72,300	3	129	127	1.76	0		
San Bernardino	22,800	2	102	64	2.81	0		
San Jose	43,600	3	107	75	1.72	0		
Santa Ana	19,500	3	32	35	1.79	0		
Santa Barbara	24,000	1	122	45	1.87	0		
Stockton	47,300	3	83	212	4.48	0		
Vallejo	26,600	1	4	10	.38	0		
Colorado								
Boulder	11,800	3	82	117	9.92	0		
Colorado Springs		3	153	284		0		
Greeley	12,500	2	35	13	1.04	0		
Pueblo	43,800	3	140	209	4.77	0		
Trinidad	11,000	3	47	15	1.36	0		
Connecticut								
Danbury				12		0		
Fairfield	14,500	3	39	38	2.62	0		
Greenwich	25,300	3	81	123	4.86	0		
Manchester	21,000	3	13	6	.29			
Meriden	36,300	3	53	47	1.29			
Milford	13,500	3	29	15	1.11	0		
New Britain	68,000	3	105	114	1.68	0		
New London	29,100	3	56	44	1.51	0		
Shelton		1	8	14				
Stamford	40,700	2	116	95	2.33	0		
Stratford	16,100	2	43	65	4.04	0		
Florida								
St. Petersburg	26,800	2	68	94	3.51	0		
Tampa	94,700	3	16	29	.31	0		
West Palm Beach		2	5	2		0		
Georgia:								
Albany	13,500	2	20	2	.15	0		
Augusta	55,200	2	70	150	2.72	0		
Brunswick	16,800	2	54	37	2.20	0		
Lagrange	23,500	1	154	4	.17	0		
Macon	58,200	3	241	138	2.37	0		
Rome	13,900	3	26	14	1.01	0		
Savannah	93,100	3	31	34	.37	0		
Idaho								
Boise	23,000	3	55	81	3.52	0		
Pocatello	18,300	3	53	35	1.91	0		
Illinois								
Aurora	40,300	2	134	202	5.01	0		
Berwyn	18,900	3	86	210	11.11	0		
Bloomington	30,400	3	298	107	3.52	0		
Blue Island	13,200	3	51	63	4.77	0		
Centralia	14,100	1	32	20	1.42	0		
Champaign	18,200	3	80	46	2.53	0		
Chicago Heights	22,100	2	7	7	.32	0		
Cicero	62,200	3	195	168	2.70	0		
Danville	37,000	2	48	60	1.62	0		
Decatur	53,900	2	144	156	2.89	0		
East Moline		2	29	21		0		
East St. Louis	71,400	3	32	13	.18	0		
Elgin	33,400	3	250	94	2.81	0		
Evanston	43,900	3	296	279	6.36	0		
Freeport	20,700	2	135	187	9.03	0		
Galesburg	24,800	3	194	155	6.25	0		
Jacksonville	15,900	3	118	194	12.20	0		
Joliet	40,600	1	26	75	1.85	0		
Kewanee	19,700	2	269	205	10.41	0		
La Salle	13,900	3	45	86	6.19	0		
Maywood	14,200	3	50	13	.92	0		
Moline	33,900	3	243	134	3.95	0		
Murphysboro	12,500	2	2	3	.24	0		
Oak Park	51,400	3	457	529	10.29	0		
Ottawa	11,500	2	13	2	.17	0		
Pekin	13,300	3	58	8	.60	0		
Peoria	81,600	3	202	495	6.07	0		
Quincy		3	130	199		0		

Reported Prevalence for the Year 1925—Continued

CHICKEN POX—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
Illinois—Continued								
Rock Island	40,000	3	195	291	7 27	0		
Rockford	76,500	3	301	250	3 27	0		
Springfield	63,900	3	178	222	3 47	0		
Streator	15,100	3	28	29	1 92	0		
Waukegan	22,000	2	113	30	1 36	0		
Indiana								
Anderson	33,900	3	153	113	3 33	0		
Bloomington	12,600	1	3	2	16	0		
Connersville	12,500	1	60	8	64	0		
Crawfordsville	10,500	3	19	17	1 62	0		
East Chicago	45,600	3	47	7	15	0		
Elkhart	27,100	2	6	6	22			
Elwood		3	55	3		0		
Fort Wayne	97,800	3	267	238	2 43	0		
Frankfort	13,100	3	27	14	1 07	0		
Gary	76,900	2	57	182	2 37	0		
Hammond	50,400	2	39	21	42	0		
Huntington	15,900	3	4	1	06	0		
Jeffersonville		3	3	2		0		
Kokomo	36,900	3	21	42	1 14	0		
La Fayette	23,800	3	18	16	67	0		
Logansport	23,100	3	20	41	1 77	0		
Michigan City	20,300	3	16	12	59	0		
Mishawaka	16,700	3	20	17	1 02	0		
Muncie	42,500	3	254	278	6 54	0		
New Albany		1	1	3		0		
Newcastle	17,000	3	6	2	12	0		
Peru	12,700			40	3 15	0		
Richmond	30,500	3	13	3	10	0		
South Bend	80,100	3	142	214	2 67	0		
Terre Haute	71,100	3	93	132	1 86	0		
Whiting	12,200	3	5	2	16	0		
Iowa								
Boone	12,800	2	9	142	11 09	0		
Burlington	26,400	3	55	67	2 54	0		
Cedar Rapids	50,600	1	32	51	1 01	0		
Clinton	26,400	3	13	9	34	0		
Council Bluffs	39,800	3	31	55	1 38	0		
Dubuque	41,000	3	127	68	1 66	0		
Fort Dodge	21,700	2	22	3	14	0		
Iowa City	15,300	3	24	21	1.37			
Marshalltown	16,900	2	32	60	3 55			
Mason City	22,700	2	20	24	1 06	0		
Muscatine	16,800	3	59	33	1 96	0		
Waterloo	36,800	2	84	206	5 60	0		
Kansas								
Arkansas City	14,000			6	43	0		
Coffeyville	16,200	3	19	42	2 59	0		
Emporia	12,200	2	25	165	13 52	0		
Fort Scott	11,800	3	14	4	.34	0		
Hutchinson	26,000	2	75	43	1 65			
Lawrence	12,300	3	57	49	3 98	0		
Leavenworth	20,900	3	36	10	48			
Parsons	14,800	3	24	53	3 58	0		
Pittsburg	19,200	3	15	10	52	0		
Topeka	55,400	3	451	514	9 28	0		
Wichita	88,400	3	508	576	6 52	0		
Kentucky								
Covington	58,300	3	41	15	26	1	02	15.0
Henderson	12,600	3	9	6	48	0		
Newport		2	14	28		0		
Paducah	25,900	3	30	53	2 05	0		
Louisiana								
Lake Charles		2	28	62		0		
Shreveport	57,900	2	58	78	1 35	0		
Maine								
Auburn	18,100	3	62	24	1.33	0		
Bangor	26,600	3	34	42	1 58	0		
Bath	17,800	3	17	24	1 35	0		
Biddeford	18,500	2	22	13	.70	0		

Reported Prevalence for the Year 1925—Continued

CHICKEN POX—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1 000 inhabitants	1925: Deaths registered	1925: Deaths per 1 000 inhabitants	1925: Cases reported for each death registered
Maine—Continued.								
Lewiston	34,900	3	68	60	1.72	0	-----	-----
Portland	75,300	3	291	222	2.95	0	-----	-----
Sanford	11,600	3	5	1	.09	0	-----	-----
South Portland	-----	1	86	26	-----	-----	-----	-----
Waterville	14,400	3	70	43	2.99	0	-----	-----
Westbrook	-----	-----	-----	4	-----	0	-----	-----
Massachusetts.								
Adams	13,500	3	13	17	1.26	0	-----	-----
Amesbury	11,200	2	15	17	1.52	0	-----	-----
Arlington	24,900	3	37	113	4.54	0	-----	-----
Athol	-----	1	12	3	-----	-----	-----	-----
Belmont	15,300	3	71	121	7.91	0	-----	-----
Beverly	22,700	3	36	42	1.85	0	-----	-----
Braintree	13,200	3	30	67	5.08	0	-----	-----
Brockton	65,300	3	130	127	1.94	0	-----	-----
Brookline	42,700	3	174	64	1.50	0	-----	-----
Chelsea	47,200	3	56	66	1.40	0	-----	-----
Chicopee	41,900	2	14	14	.33	0	-----	-----
Clinton	14,200	3	29	35	2.46	0	-----	-----
Danvers	11,800	3	11	7	.59	0	-----	-----
Dedham	13,900	3	21	27	1.94	0	-----	-----
Easthampton	11,600	3	4	8	.69	0	-----	-----
Everett	42,100	3	97	59	1.40	0	-----	-----
Framingham	21,100	3	115	57	2.70	0	-----	-----
Gardner	18,700	3	33	22	1.18	0	-----	-----
Gloucester	23,400	-----	-----	12	.51	0	-----	-----
Greenfield	15,200	3	52	89	5.86	0	-----	-----
Haverhill	49,200	3	129	104	2.11	0	-----	-----
Holyoke	60,300	3	39	43	.71	0	-----	-----
Lawrence	93,500	3	146	67	.72	0	-----	-----
Leominster	22,100	3	55	10	.45	0	-----	-----
Malden	51,800	3	73	58	1.12	0	-----	-----
Marlboro	16,200	2	35	20	1.23	0	-----	-----
Medford	47,600	3	83	129	2.71	0	-----	-----
Melrose	20,200	3	33	28	1.39	0	-----	-----
Methuen	20,600	3	47	66	3.20	0	-----	-----
Milton	-----	1	163	81	-----	-----	-----	-----
Newburyport	15,700	3	31	49	3.12	0	-----	-----
Newton	53,000	3	183	274	5.17	0	-----	-----
North Adams	22,700	2	7	1	.04	0	-----	-----
Northampton	24,100	3	57	99	4.11	0	-----	-----
Northbridge	10,100	3	14	16	1.58	0	-----	-----
Palmer	-----	2	5	1	-----	0	-----	-----
Peabody	19,900	3	30	16	.80	0	-----	-----
Pittsfield	46,900	3	37	35	.75	0	-----	-----
Plymouth	13,200	3	38	5	.38	0	-----	-----
Quincy	60,100	3	96	59	.98	0	-----	-----
Revere	33,300	-----	-----	23	.69	0	-----	-----
Salem	42,800	3	51	140	3.27	0	-----	-----
Saugus	12,700	3	13	16	1.26	0	-----	-----
Somerville	99,000	3	94	167	1.69	0	-----	-----
Southbridge	15,500	8	8	6	.39	0	-----	-----
Wakefield	15,600	3	25	28	1.79	0	-----	-----
Waltham	34,700	3	123	100	2.88	0	-----	-----
Watertown	25,500	3	76	54	2.12	0	-----	-----
West Springfield	15,300	2	18	8	.52	-----	-----	-----
Westfield	19,300	3	20	14	.73	0	-----	-----
Winchester	11,600	3	100	20	1.72	0	-----	-----
Winthrop	16,200	3	49	98	6.05	0	-----	-----
Woburn	18,400	3	14	14	.76	0	-----	-----
Michigan								
Adrian	12,500	2	12	10	.80	0	-----	-----
Ann Arbor	22,200	3	191	108	4.86	0	-----	-----
Battle Creek	42,300	3	341	387	9.15	0	-----	-----
Bay City	48,900	3	22	9	.18	0	-----	-----
Benton Harbor	14,000	3	13	34	2.43	0	-----	-----
Cadillac	-----	1	10	2	-----	0	-----	-----
Hamtramck	81,700	3	29	51	.62	0	-----	-----
Highland Park	72,300	3	282	233	3.22	0	-----	-----
Holland	13,100	3	16	27	2.06	0	-----	-----

Reported Prevalence for the Year 1925—Continued

CHICKEN POX—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Michigan—Continued								
Ironwood	17,400	3	89	82	4.71	0	-------	-------
Ishpeming	-------	2	16	7	-------	0	-------	-------
Jackson	58,000	3	373	395	6.81	0	-------	-------
Kalamazoo	53,600	3	287	300	5.60	0	-------	-------
Lansing	70,800	3	494	313	4.42	0	-------	-------
Marquette	13,400	2	83	105	7.84	0	-------	-------
Muskegon	43,100	3	68	64	1.48	0	-------	-------
Muskegon Heights	-------	2	29	72	-------	-------	-------	-------
Pontiac	47,500	3	336	176	3.71	0	-------	-------
Port Huron	30,000	3	229	139	4.63	0	-------	-------
River Rouge	-------	1	1	5	-------	0	-------	-------
Saginaw	72,100	3	183	82	1.14	0	-------	-------
Sault Ste Marie	-------	3	109	63	-------	0	-------	-------
Minnesota:								
Albert Lea	-------	1	6	10	-------	-------	-------	-------
Austin	11,900	3	1	50	4.20	-------	-------	-------
Brainerd	-------	1	21	10	-------	-------	-------	-------
Faribault	12,300	3	45	59	4.80	0	-------	-------
Hibbing	18,000	3	27	4	.22	0	-------	-------
Mankato	13,700	-------	-------	1	.07	0	-------	-------
Rochester	17,000	2	100	228	13.41	0	-------	-------
St Cloud	18,900	2	4	1	.05	0	-------	-------
Winona	19,500	3	27	95	4.87	-------	-------	-------
Mississippi:								
Biloxi	12,600	3	10	20	1.59	0	-------	-------
Jackson	23,700	2	72	89	3.76	0	-------	-------
Laurel	15,700	-------	-------	74	4.71	-------	-------	-------
Meridian	24,300	1	19	35	1.44	-------	-------	-------
Natchez	13,100	-------	-------	32	2.44	0	-------	-------
Missouri:								
Independence	12,700	2	15	25	1.97	0	-------	-------
Joplin	-------	2	19	4	-------	0	-------	-------
Moberly	13,900	3	43	42	3.02	0	-------	-------
St Joseph	78,300	3	67	117	1.49	0	-------	-------
Springfield	42,100	2	24	124	2.95	0	-------	-------
Montana:								
Anaconda	12,500	3	25	12	.96	0	-------	-------
Butte	42,900	3	44	41	.96	0	-------	-------
Great Falls	29,900	3	198	201	6.72	0	-------	-------
Helena	-------	3	25	5	-------	0	-------	-------
Missoula	-------	2	44	32	-------	0	-------	-------
Nebraska:								
Grand Island	15,600	3	23	30	1.92	-------	-------	-------
Lincoln	60,900	3	293	244	4.01	0	-------	-------
North Platte	13,700	2	15	13	.95	-------	-------	-------
Nevada:								
Reno	12,700	3	16	4	.31	0	-------	-------
New Hampshire:								
Berlin	18,600	1	5	-------	-------	1	.05	-------
Claremont	-------	2	11	3	-------	-------	-------	-------
Dover	-------	3	8	44	-------	0	-------	-------
Keene	11,900	3	7	10	.84	0	-------	-------
Manchester	83,100	3	16	4	.05	0	-------	-------
Nashua	29,700	3	9	1	.03	0	-------	-------
Portsmouth	14,900	3	42	16	1.07	-------	-------	-------
New Jersey:								
Asbury Park	13,700	3	30	68	4.96	0	-------	-------
Bayonne	88,800	2	58	38	.43	0	-------	-------
Belleville	18,900	3	34	65	3.44	0	-------	-------
Bridgeton	14,400	3	35	14	.97	0	-------	-------
Clifton	34,700	3	29	25	.72	0	-------	-------
Collingswood	-------	1	40	21	-------	-------	-------	-------
Dover	-------	2	98	19	-------	-------	-------	-------
East Orange	60,000	3	282	315	5.25	0	-------	-------
Englewood	12,600	3	49	125	9.92	0	-------	-------
Garfield	24,600	2	11	5	.20	0	-------	-------
Gloucester City	13,700	2	16	7	.51	0	-------	-------
Hackensack	19,700	3	76	65	3.30	0	-------	-------
Harrison	16,400	3	29	7	.43	-------	-------	-------
Hoboken	-------	3	29	14	-------	0	-------	-------
Irvington	33,200	2	125	116	3.49	0	-------	-------

Reported Prevalence for the Year 1925—Continued

CHICKEN POX—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
New Jersey—Continued								
Kearny	31,300	3	147	191	6.10	0		
Lodi		1	6	5				
Long Branch	13,600	3	96	96	7.06	0		
Montclair	32,900	3	180	208	6.32	0		
Morristown	12,600	3	61	126	10.00	0		
New Brunswick	38,000	1	21	6	.16	0		
Nutley				5				
Orange	35,400	3	137	116	3.28	0		
Passaic	69,000	3	153	67	.97	0		
Perth Amboy	47,100	2	30	31	.66	0		
Plainfield	31,700	3	68	90	2.84	0		
Rahway	12,000	3	12	10	.83	0		
Red Bank		1	24	7				
Ridgefield Park		2	30	84				
Rutherford		2	15	52		0		
Summit	11,700	3	70	38	3.25	0		
Union City	63,100			17	.27			
West New York	39,200	3	43	86	2.19	0		
West Orange	18,200	3	90	71	3.90			
New Mexico								
Albuquerque	21,000			105	5.00	0		
New York								
Amsterdam	35,300	3	110	254	7.20	0		
Binghamton	71,900	3	303	322	4.48	0		
Cohoes	23,000	3	34	17	.74	0		
Corning	15,700	2	19	68	4.33	0		
Cortland	13,900	3	16	12	.86	0		
Dunkirk	19,900	3	60	33	1.66	0		
Elmira	48,400	2	263	310	6.40	0		
Freeport		1	10	36				
Geneva	15,900	2	120	24	1.51	0		
Glens Falls	17,900	3	51	28	1.56	0		
Gloversville	22,100	3	71	90	4.07	0		
Hornell	15,800	3	150	164	10.38	0		
Hudson	11,800	3	15	51	4.32	0		
Ilion	10,400			55	5.29	0		
Ithaca	18,900	3	70	21	1.11	0		
Jamestown	43,400	3	179	336	7.74	0		
Johnson City		1	114	140		0		
Johnstown	10,700	1	23	14	1.31	0		
Kingston	28,100	2	59	38	1.35	0		
Lackawanna	20,200	3	59	20	.99	0		
Little Falls	12,400	3	37	73	5.89	0		
Lockport	21,700	3	38	44	2.03	0		
Middletown	20,400	3	78	64	3.14	0		
Mount Vernon	50,400	3	114	233	4.62	0		
New Rochelle	44,200	3	81	123	2.78	0		
Newburgh	30,400	3	48	60	1.97	0		
Niagara Falls	57,000	3	215	197	3.46	0		
North Tonawanda	17,400	3	59	38	2.18	0		
Olean	21,300	3	92	153	7.18	0		
Peekskill	18,000	3	69	36	2.00	0		
Poughkeepsie	35,700	3	112	109	3.05	0		
Rensselaer	11,400	3	20	20	1.75	0		
Rome	30,300	3	44	72	2.38	0		
Salamanca		1	27	24				
Saratoga Springs	13,900	3	128	11	.79	0		
Schenectady	92,800	3	190	383	4.13	0		
Watertown	32,800	3	312	147	4.48	0		
Watervliet	16,200	2	5	8	.49	0		
White Plains	27,400	3	93	130	4.74	0		
North Carolina.								
Asheville	31,500	3	72	41	1.30			
Charlotte	53,300	1	240	135	2.53	0		
Greensboro	47,100	3	132	103	2.19	0		
High Point	23,600	1	81	93	3.94	0		
New Bern	12,200	2	1	39	3.20	0		
Raleigh	30,400	3	266	199	6.55	0		
Rocky Mount	15,100	2	19	11	.73	0		

Reported P[illegible] for the Year 1925—Continued

CHICKEN POX—Continued

City	Estimated population, July 1, 1925	Average, 1922-1924: Number of years	Average, 1922-1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
North Carolina—Continued								
Salisbury	17,700	1	77	46	2.60	0	--------	--------
Wilson	12,800	--------	--------	4	.31	--------	--------	--------
Winston-Salem	69,000	3	205	199	2.88	0	--------	--------
North Dakota:								
Fargo	24,900	2	82	190	7.63	1	0.04	190.0
Ohio:								
Alliance	25,000	2	23	22	.88	0	--------	--------
Ashtabula	25,100	3	39	12	.48	0	--------	--------
Barberton	23,300	3	10	14	.60	0	--------	--------
Bellaire	16,300	3	34	26	1.60	0	--------	--------
Bellefontaine	--------	--------	--------	25	--------	0	--------	--------
Bucyrus	11,700	3	26	17	1.45	0	--------	--------
Cambridge	14,000	3	16	16	1.14	0	--------	--------
Chillicothe	16,600	3	11	19	1.14	0	--------	--------
Cleveland Heights	22,200	3	210	543	24.46	0	--------	--------
Conneaut	--------	2	38	13	--------	--------	--------	--------
Cuyahoga Falls	13,700	3	39	48	3.50	0	--------	--------
East Cleveland	37,600	3	254	226	6.01	0	--------	--------
East Liverpool	22,000	3	6	6	.27	0	--------	--------
East Youngstown (Campbell)	16,000	3	55	42	2.62	0	--------	--------
Elyria	23,800	3	67	29	1.22	0	--------	--------
Findlay	18,200	3	71	142	7.80	0	--------	--------
Fremont	13,900	3	27	11	.79	0	--------	--------
Hamilton	42,400	3	24	10	.24	0	--------	--------
Kenmore	19,400	3	74	11	.57	0	--------	--------
Lakewood	56,800	2	52	64	1.13	0	--------	--------
Lancaster	16,100	2	2	26	1.61	0	--------	--------
Lima	46,700	3	146	61	1.31	0	--------	--------
Lorain	42,300	3	203	182	4.30	0	--------	--------
Mansfield	31,800	3	138	186	5.85	0	--------	--------
Marietta	15,300	1	6	2	.13	0	--------	--------
Marion	32,500	1	12	2	.06	0	--------	--------
Martins Ferry	15,500	3	10	3	.19	0	--------	--------
Newark	30,500	3	166	180	5.90	0	--------	--------
Niles	16,600	3	53	44	2.65	0	--------	--------
Norwood	29,900	3	39	31	1.04	0	--------	--------
Piqua	16,000	3	30	7	.44	--------	--------	--------
Salem	11,100	3	117	36	3.24	0	--------	--------
Sandusky	24,500	3	221	101	4.12	0	--------	--------
Springfield	68,700	3	197	100	1.46	0	--------	--------
Steubenville	32,000	3	11	4	.12	0	--------	--------
Zanesville	30,400	3	46	28	.92	0	--------	--------
Oklahoma:								
Ardmore	17,200	1	50	87	5.06	1	.06	87.0
Okmulgee	25,300	--------	--------	25	.99	0	--------	--------
Oregon:								
Astoria	16,500	3	20	16	.97	0	--------	--------
Eugene	11,400	3	27	15	1.32	0	--------	--------
Pennsylvania:								
Allentown	92,200	2	331	195	2.11	0	--------	--------
Altoona	66,100	3	133	106	1.60	0	--------	--------
Beaver Falls	13,100	3	40	8	.61	--------	--------	--------
Braddock	21,700	3	29	58	2.67	0	--------	--------
Bradford	15,800	3	96	50	3.16	0	--------	--------
Butler	25,200	3	89	50	1.98	0	--------	--------
Carbondale	19,500	3	4	15	.77	--------	--------	--------
Carlisle	11,400	3	58	144	12.63	--------	--------	--------
Carnegie	12,400	3	30	19	1.53	0	--------	--------
Carrick	13,000	3	18	10	.77	--------	--------	--------
Chambersburg	13,900	3	36	79	5.68	0	--------	--------
Charleroi	12,600	3	32	16	1.27	--------	--------	--------
Clairton	14,900	2	102	22	1.48	0	--------	--------
Coatesville	16,500	3	31	48	2.91	0	--------	--------
Columbia	--------	--------	--------	7	--------	--------	--------	--------
Connellsville	14,300	3	19	20	1.40	0	--------	--------
Dubois	14,300	2	71	15	1.05	--------	--------	--------
Duquesne	20,900	2	13	8	.38	0	--------	--------

Reported Prevalence for the Year 1925—Continued

CHICKEN POX—Continued

City	Estimated population, July 1, 1925	Average 1922–1924 Number of years	Average 1922–1924 Cases	1925 Cases reported	1925 Cases per 1,000 inhabitants	1925 Deaths registered	1925 Deaths per 1,000 inhabitants	1925 Cases reported for each death registered
Pennsylvania—Continued								
Easton	36,800	2	94	84	2.28	0		
Farrell	18,700	3	55	91	4 87	1	0 05	91 0
Greensburg	16,100	1	11	17	1 06	0		
Harrisburg	83,400	3	378	271	3 25	0		
Hazleton	36,100	3	57	8	22	0		
Homestead	21,400	3	23	12	56	0		
Jeannette	11,700	3	27	1	09	0		
Kingston	18,000	2	123	32	1 78	0		
Lancaster	56,500	3	366	319	5 65	1	02	319 0
Lansford		2	6	4		0		
Latrobe				12		0		
Lewistown		2	31	39		0		
McKees Rocks	18,100	2	28	5	28	0		
McKeesport	49,100	3	42	32	65	0		
Meadville	15,600			6	38			
Monessen	21,200	3	44	25	1 18	0		
Mount Carmel		2	5	5		0		
Nanticoke	24,700	3	4	1	04	0		
New Castle	49,800	3	90	20	40	0		
Norristown	34,800	3	155	81	2 33	0		
North Braddock	16,700	3	23	63	3 77	0		
Oil City	23,300	3	194	54	2 32			
Olyphant	11,200	2	1			1	09	
Phoenixville		3	24	72				
Pittstown	19,800	3	5	9	45			
Plymouth		2	18	3				
Pottstown	18,500	2	40	22	1 19	0		
Sharon	25,000	3	89	48	1 92	0		
Steelton		3	46	47		0		
Sunbury	16,800	3	70	130	7.74	0		
Swissvale	12,900	3	84	67	5 19	0		
Vandergrift		1	12	28		0		
Warren	15,100	3	181	88	5 83	0		
Washington	23,000	3	135	69	3 00			
Waynesboro				40				
West Chester		3	81	35		0		
Wilkes-Barre	77,600	1	184	181	2 33	0		
Wilkinsburg	27,400	1	133	40	1 46	0		
Windber		1	6	46		0		
Woodlawn	18,900	3	77	46	2 43	0		
York	49,100	2	127	95	1.93	0		
Rhode Island								
Central Falls	25,400			4	.16			
Cranston	34,500	2	8	7	.20	0		
Pawtucket	69,800	2	60	132	1 89	0		
South Carolina:								
Charleston	73,100	1	32	17	23	0		
Florence	13,200			2	.15	0		
Greenville	27,300	3	23	7	.26	0		
Spartanburg	25,500	2	41	18	71	0		
South Dakota:								
Aberdeen	15,000	3	171	94	6.27			
Sioux Falls	30,100	3	54	77	2.56	0		
Tennessee								
Chattanooga	66,600	1	87	33	50			
Knoxville	95,500	3	41	43	45	0		
Texas.								
Beaumont	50,600	2	6	1	.02	0		
Cleburne	14,200			40	2.82	0		
Corpus Christi	11,800			50	4 24	0		
Galveston	48,400	3	3	28	.58	0		
Orange				65		0		
Palestine	11,400			3	.26			
Texarkana	12,400			6	48	0		
Tyler	13,000	3	21	21	1.62	0		
Waco	43,900	3	44	52	1.18	0		
Utah								
Ogden	36,900	3	268	233	6 31	0		
Provo	11,200	2	116	52	4 64	0		

Reported Prevalence for the Year 1925—Continued

CHICKEN POX—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
Vermont:								
Barre	-------	3	22	39	-------	0	-------	-------
Bennington	-------	2	23	95	-------	0	-------	-------
Burlington	24,100	3	76	64	2.66	0	-------	-------
Rutland	15,800	1	40	114	7.22	0	-------	-------
Virginia:								
Alexandria	18,500	3	52	30	1.62	0	-------	-------
Charlottesville	11,200	2	12	15	1.34	0	-------	-------
Danville	23,000	3	45	26	1.13	0	-------	-------
Lynchburg	30,400	3	180	171	5.62	0	-------	-------
Newport News	47,100	3	135	212	4.50	0	-------	-------
Petersburg	35,700	3	23	33	.92	0	-------	-------
Portsmouth	59,000	3	12	8	.14	0	-------	-------
Roanoke	58,200	2	118	119	2.04	0	-------	-------
Suffolk	-------	-------	-------	37	-------	0	-------	-------
Washington:								
Aberdeen	16,200	3	14	21	1.30	0	-------	-------
Bremerton	-------	2	65	240	-------	0	-------	-------
Everett	29,300	3	52	103	3.52	0	-------	-------
Vancouver	14,500	2	58	42	2.90	0	-------	-------
Walla Walla	-------	3	6	62	-------	0	-------	-------
Yakima	22,700	3	202	220	9.69	0	-------	-------
West Virginia:								
Bluefield	19,300	1	47	24	1.24	0	-------	-------
Charleston	49,000	3	98	97	1.98	0	-------	-------
Clarksburg	30,400	3	177	304	10.00	0	-------	-------
Fairmont	21,000	3	28	60	2.86	-------	-------	-------
Huntington	63,500	2	59	2	.03	-------	-------	-------
Martinsburg	13,500	3	22	9	.67	0	-------	-------
Parkersburg	21,300	1	14	2	.09	0	-------	-------
Wheeling	-------	3	232	100	-------	0	-------	-------
Wisconsin:								
Appleton	21,100	3	32	36	1.71	0	-------	-------
Ashland	-------	2	3	2	-------	-------	-------	-------
Beloit	24,800	3	148	121	4.88	0	-------	-------
Eau Claire	22,400	3	104	196	8.75	0	-------	-------
Fond du Lac	26,000	3	10	22	.85	0	-------	-------
Green Bay	34,300	3	40	73	2.13	0	-------	-------
Janesville	20,800	3	100	51	2.45	0	-------	-------
Kenosha	50,900	3	353	491	9.65	0	-------	-------
La Crosse	30,400	2	130	241	7.93	0	-------	-------
Madison	46,400	3	401	372	8.02	-------	-------	-------
Manitowoc	22,100	2	65	27	1.22	0	-------	-------
Marinette	-------	3	25	11	-------	0	-------	-------
Oshkosh	33,200	3	103	88	2.65	0	-------	-------
Racine	67,700	3	193	393	5.81	0	-------	-------
Sheboygan	33,500	3	46	25	.75	0	-------	-------
Superior	-------	3	46	99	-------	0	-------	-------
Waukesha	14,700	1	45	42	2.86	0	-------	-------
Wausau	20,100	3	91	139	6.92	0	-------	-------
West Allis	18,400	3	17	55	2.99	0	-------	-------
Wyoming:								
Cheyenne	15,500	-------	-------	35	2.26	0	-------	-------

DENGUE

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama:						
Mobile	66,000	1	0.02	0	-------	-------
Tuscaloosa	13,100	58	4.43	0	-------	-------
Florida:						
Tampa	94,700	1	.01	0	-------	-------
West Palm Beach	-------	-------	-------	1	-------	-------

Reported Prevalence for the Year 1925—Continued

DENGUE—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Georgia:						
Savannah	93, 100	5	0 05	1	0 01	5 0
Mississippi						
Laurel	15, 700	1, 160	73 82			
Meridian	24, 300	1	04			
Natchez	13, 100	1	08	0		
Rhode Island						
Woonsocket	49, 700			1	02	
Texas						
Corpus Christi	11, 800	40	3 39	0		
Palestine	11, 400	20	1 75			
Texarkana	12, 400	12	97	0		

DIPHTHERIA

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Alabama								
Anniston	20, 500	7	56	24	1 17	3	0 15	12 5
Dothan	14, 500	2	6	12	83	1	07	8 3
Florence	12, 700	1	6	8	63	1	08	12 5
Mobile	66, 000	7	70	25	38	2	03	8 0
Montgomery	46, 500	5	55	72	1. 55	3	06	4 2
Selma	17, 000					2	12	
Tuscaloosa	13, 100			18	1 37	1	08	5 6
Arizona:								
Phoenix	38, 700	2	27	19	49	3	08	15 8
Tucson	26, 700	3	31	5	19	0		
Arkansas								
Hot Springs		3	10	8				
Little Rock	74, 200	7	77	56	75	6	.08	10 7
California:								
Alameda	31, 900	7	80	48	1. 50	3	09	6 2
Alhambra		2	47	42		2		4 8
Bakersfield	23, 500	7	40	42	1. 79	0		
Berkeley	66, 200	4	100	90	1. 36	1	.02	1 1
Chico		2	3	3		0		
Eureka	13, 500	7	13	7	. 52	0		
Fresno	58, 500	5	109	93	1. 59	2	.03	2 2
Glendale	21, 300	5	79	104	4. 88	4	19	3 8
Long Beach	91, 200	7	122	64	70	4	.04	6 2
Modesto		2	50	51		0		
Pasadena	56, 700	7	63	53	. 93	2	04	3 8
Pomona	15, 400	5	24	17	1 10	2	13	11 8
Richmond	22, 500	3	55	27	1. 20	1	04	3. 7
Riverside		7	36	34		0		
Sacramento	72, 300	7	107	100	1 38	5	.07	5 0
San Bernardino	22, 800	7	25	52	2. 28	3	.13	5 8
San Jose	43, 600	5	116	40	92	0		
Santa Ana	19, 500	5	30	92	4. 72	0		
Santa Barbara	24, 000	5	29	38	1 58	1	.04	2. 6
Stockton	47, 300	4	100	73	1. 54	1	02	1 4
Vallejo	26, 600	4	31	2	.08	0		
Colorado								
Boulder	11, 800	5	11	47	3. 98	1	.08	2 1
Colorado Springs		7	23	50		3		6 0
Greeley	12, 500	2	12			3	.24	
Pueblo	43, 800	3	169	187	4 27	14	32	7. 5
Trinidad	11, 000	7	17	8	. 73	0		
Connecticut								
Danbury		4	18	7		1		14. 3
Fairfield	14, 500	4	29	12	83	0		
Greenwich	25, 300	7	35	14	55	1	04	7. 1
Manchester	21, 000	6	12	5	24			
Meriden	36, 300	5	66	22	. 61			

Reported Prevalence for the Year 1925—Continued

DIPHTHERIA—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Connecticut—Continued								
Milford	13,500	5	13	6	0 44	1	0 07	16 7
New Britain	68,000	7	181	94	1 38	7	10	7 4
New London	29,100	7	62	20	69	3	.10	15 0
Norwich	23,100	7	45	51	2.21	9	39	17 6
Shelton		1	7	12		1		8 3
Stamford	40,700	3	41	72	1 77	12	29	16 7
Stratford	16,100	4	38	16	99	4	.25	25 0
Florida								
St Petersburg	26,800	2	61	34	1 27	3	.11	8 8
Tampa	94,700	4	75	46	49	4	04	8 7
West Palm Beach		2	4	13		1		7 7
Georgia								
Albany	13,500	4	12	12	89	1	07	8 3
Augusta	55,200	5	46	26	17	4	07	15 4
Brunswick	16,800	7	5	1	06	0		
Lagrange	23,500	2	29	19	81	0		
Macon	58,200	7	84	44	76	1	02	2 3
Rome	13,900	5	23	7	50	0		
Savannah	93,100	6	96	51	55	[1] 7	08	13 7
Idaho								
Boise	23,000	6	14	17	74	0		
Pocatello	18,300	5	48	26	1 42	2	11	7 7
Illinois								
Alton	26,800	6	79	31	1 16	1	04	3 2
Aurora	40,300	6	141	48	1 19	0		
Berwyn	18,900	3	39	33	1 75	2	11	6 1
Bloomington	30,400	5	22	26	86	4	13	15 4
Blue Island	13,200	5	31	2	15	1	08	50 0
Centralia	14,100	6	15	4	28			
Champaign	18,200	7	12	6	33	1	05	16 7
Chicago Heights	22,100	2	43	14	63	0		
Cicero	62,200	7	141	58	93	8	13	13 8
Danville	37,000	6	25	18	49	0		
Decatur	53,900	4	39	45	83	0		
East Moline		2	19	8		0		
East St Louis	71,400	5	111	26	36	2	03	7 7
Elgin	33,400	7	22	14	42	1	03	7.1
Evanston	43,900	7	46	6	14	[1] 1	.02	16 7
Freeport	20,700	5	20	8	39	0		
Galesburg	24,800	7	21	10	40	1	04	10.0
Jacksonville	15,900	6	17	11	69	0		
Joliet	40,600	4	38	5	12	0		
Kewanee	19,700	4	19	10	51	2	10	20 0
La Salle	13,900	6	23	4	29	1	.07	25 0
Maywood	14,200	7	37	19	1 34	1	07	5 3
Moline	33,900	7	57	14	41	3	09	21.4
Murphysboro	12,500	3	13	9	72	0		
Oak Park	51,400	7	81	36	70	2	04	5 6
Ottawa	11,500	5	17	14	1 22	1	09	7 1
Pekin	13,300	7	24	10	75	1	08	10 0
Peoria	81,600	7	90	20	25	1	01	5 0
Quincy		7	30	34		3		8 8
Rock Island	40,000	7	43	70	1 75	3	.07	4 3
Rockford	76,500	7	97	24	31	1	01	4.2
Springfield	63,900	6	90	64	1 00	3	.05	4 7
Streator	15,100	4	72	22	1 46	0		
Waukegan	22,000	4	39	6	27	0		
Indiana								
Bloomington	12,600	4	23	10	79	2	.16	20 0
Connersville	12,500	1	5	15	1 20	0		
Crawfordsville	10,500	6	9	4	38	0		
East Chicago	45,600	7	86	23	50	1	02	4 3
Elkhart	27,100	5	28	10	37			
Elwood		6	11	1		1		100 0
Fort Wayne	97,800	7	207	75	77	3	03	4.0
Gary	76,900	5	120	44	57	2	03	4.5
Hammond	50,400	6	62	27	54	2	04	7 4
Huntington	15,900	5	18	7	44	1	.06	14.3
Kokomo	36,900	7	36	24	65	1	.03	4 2
La Fayette	23,800	7	42	12	50	1	.04	8 3
Logansport	23,100	7	12	9	39	1	.04	11 1
Marion	26,300	6	44			1	.04	

[1] Includes nonresidents

Reported Prevalence for the Year 1925—Continued

DIPHTHERIA—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Indiana—Continued								
Michigan City	20,300	4	44	23	1.13	1	0.05	4.3
Mishawaka	16,700	7	15	3	.18	0		
Muncie	42,500	7	54	25	.59	1	.02	4.0
New Albany		5	12	13		0		
Newcastle	17,000	7	10	4	.24	1	.06	25.0
Peru	12,700	2	10	15	1.18	0		
Richmond	30,500	7	24	7	.23	0		
South Bend	80,100	6	74	97	1.21	11	.14	11.3
Terre Haute	71,100	5	69	34	.48	1	.01	2.9
Whiting	12,200	3	14	16	1.31	2	.16	12.5
Iowa								
Boone	12,800	4	20	15	1.17	0		
Burlington	26,400	6	52	17	.64	2	.08	11.8
Cedar Rapids	50,600	7	63	34	.67	1	.02	2.9
Clinton	26,400	4	47	65	2.46	3	.11	4.6
Council Bluffs	39,800	7	60	21	.53	0		
Dubuque	41,000	6	65	62	1.51	5	.12	8.1
Fort Dodge	21,700	4	45	20	.92	0		
Iowa City	15,300	4	19	31	2.03			
Marshalltown	16,900	5	20	9	.53			
Mason City	22,700	7	39	12	.53	1	.04	8.3
Muscatine	16,800	6	11	3	.18	1	.06	33.3
Ottumwa	26,400	4	41			1	.04	
Waterloo	36,800	4	30	8	.22	1	.03	12.5
Kansas								
Arkansas City	14,000			1	.07	0		
Coffeyville	16,200	6	21	28	1.73	0		
Emporia	12,200	2	33	22	1.80	0		
Fort Scott	11,800	7	34	29	2.46	0		
Hutchinson	26,000	4	38	2	.08			
Lawrence	12,300	7	21	22	1.79	1	.08	4.5
Leavenworth	20,900	7	54	22	1.05			
Parsons	14,800	4	44	8	.54	1	.07	12.5
Pittsburg	19,200	6	52	65	3.39	1	.05	1.5
Topeka	55,400	6	120	59	1.06	0		
Wichita	88,400	7	297	112	1.27	0		
Kentucky								
Covington	58,300	5	74	40	.69	0		
Henderson	12,600	3	5	3	.24	1	.08	33.3
Newport		5	28	6		0		
Paducah	25,900	7	32	11	.42	1	.04	9.1
Louisiana								
Baton Rouge	27,800	5	22	37	1.33	0		
Lake Charles		3	4	14		1		7.1
Shreveport	57,900	3	31	36	.62	[1] 5	.09	13.9
Maine								
Auburn	18,100	5	7	41	2.27	0		
Bangor	26,600	5	15	5	.19	0		
Biddeford	18,500	5	19	12	.65	0		
Lewiston	34,900	6	38	34	.97	1	.03	2.9
Portland	75,300	7	134	46	.61	4	.05	8.7
Sanford	11,600	7	4			1	.09	
South Portland		1	10	6				
Waterville	14,400	7	24	2	.14	0		
Westbrook				25		2		8.0
Massachusetts								
Adams	13,500	7	11	17	1.26	0		
Amesbury	11,200	4	30	13	1.16	1	.09	7.7
Arlington	24,900	7	30	19	.76	0		
Athol		1	3	1		0		
Attleboro	20,600	7	13	7	.34	0		
Belmont	15,300	5	12	5	.33	0		
Beverly	22,700	7	16	25	1.10	1	.04	4.0
Braintree	13,200	5	18	18	1.36	1	.08	5.6
Brockton	65,300	7	183	39	.60	5	.08	12.8
Brookline	42,700	7	42	10	.23	0		
Chelsea	47,200	7	83	55	1.17	2	.04	3.6
Chicopee	41,900	7	70	48	1.15	2	.05	4.2
Clinton	14,200	7	9	17	1.20	0		
Danvers	11,800	7	20	5	.42	0		
Dedham	13,900	5	19	20	1.44	1	.07	5.0
Easthampton	11,600	6	27	5	.43	1	.09	20.0

[1] Includes nonresidents

Reported Prevalence for the Year 1925—Continued

DIPHTHERIA—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Massachusetts—Continued								
Everett	42,100	7	127	61	1.45	1	0.02	1.6
Framingham	21,100	7	13	23	1.09	4	.19	17.4
Gardner	18,700	7	19	1	.05	0		
Gloucester	23,400			58	2.48	4	.17	6.9
Greenfield	15,200	7	20	8	.53	1	.07	12.5
Haverhill	49,200	7	151	71	1.44	2	.04	2.8
Holyoke	60,300	7	52	77	1.28	9	.15	11.7
Lawrence	93,500	7	146	96	1.03	17	.18	17.7
Leominster	22,100	7	20	22	1.00	1	.05	4.5
Malden	51,800	7	145	59	1.14	8	.15	13.6
Marlboro	16,200	6	18	10	.62	1	.06	10.0
Medford	47,600	7	70	32	.67	0		
Melrose	20,200	7	24	25	1.24	3	.15	12.0
Methuen	20,600	6	26	16	.78	1	.05	6.2
Milford	14,800	7	9	11	.74	1	.07	9.1
Milton		1	6	1				
Newburyport	15,700	7	13	8	.51	1	.06	12.5
Newton	53,000	7	88	19	.36	1	.02	5.3
North Adams	22,700	7	13	24	1.06	5	.22	20.8
Northampton	24,100	7	31	7	.29	0		
Northbridge	10,100	7	4	8	.79	1	.10	12.5
Palmer		2	8	7		1		14.3
Peabody	19,900	7	43	41	2.06	3	.15	7.3
Pittsfield	46,900	7	69	92	1.96	3	.06	3.3
Plymouth	13,200	3	16	5	.38	0		
Quincy	60,100	7	122	131	2.18	1	.02	.8
Revere	33,300	1	79	93	2.79	1	.03	1.1
Salem	42,800	7	87	173	4.04	10	.23	5.8
Saugus	12,700	6	14	6	.47	1	.08	16.7
Somerville	99,000	7	205	113	1.14	3	.03	2.7
Southbridge	15,500	7	9	28	1.81	3	.19	10.7
Taunton	39,300	5	20	12	.31	1	.03	8.3
Wakefield	15,600	3	35	9	.58	0		
Waltham	34,700	7	74	12	.35	1	.03	8.3
Watertown	25,500	7	53	29	1.14	0		
West Springfield	15,300	5	10	8	.52			
Westfield	19,300	7	32	18	.93	6	.31	33.3
Winchester	11,600	6	12	13	1.12	0		
Winthrop	16,200	7	16	2	.12	0		
Woburn	18,400	7	19	15	.82	0		
Michigan.								
Adrian	12,500	3	6	12	.96	1	.08	8.3
Ann Arbor	22,200	7	85	28	1.26	4	.18	14.3
Battle Creek	42,300	7	178	48	1.13	0		
Bay City	48,900	7	125	41	.84	3	.06	7.3
Benton Harbor	14,000	7	27	5	.36	0		
Cadillac		4	39	11		2		18.2
Hamtramck	81,700	5	188	33	.40	3	.04	9.1
Highland Park	72,300	7	93	36	.50	2	.03	5.6
Holland	13,100	6	19	6	.46	1	.08	16.7
Ironwood	17,400	7	20	4	.23	0		
Ishpeming		5	17	9		1		11.1
Jackson	58,000	7	86	65	1.12	4	.07	6.2
Kalamazoo	53,600	6	110	16	.30	3	.06	18.7
Lansing	70,800	6	193	143	2.02	6	.08	4.2
Marquette	13,400	6	10	6	.45	1	.07	16.7
Monroe	14,200	3	11	3	.21			
Muskegon	43,100	6	121	80	1.86	3	.07	3.7
Muskegon Heights		2	61	23				
Pontiac	47,500	7	147	199	4.19	8	.17	4.0
Port Huron	30,000	6	60	35	1.17	2	.07	5.7
River Rouge		2	22	26		0		
Saginaw	72,100	5	104	30	.42	3	.04	10.0
Sault Ste Marie		5	19	10		1		10.0
Minnesota								
Albert Lea		1	14	1		0		
Brainerd				13		1		7.7
Faribault	12,300	5	29	44	3.58	2	.16	4.5
Hibbing	18,000	6	28	9	.50	0		
Mankato	13,700	5	3	12	.88	2	.15	16.7
Rochester	17,000	3	26	6	.35	1	.06	16.7
St Cloud	18,900	4	115	73	3.86	3	.16	4.1
Virginia	16,000	1	28	5	.31	0		

Reported Prevalence for the Year 1925—Continued

DIPHTHERIA—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Mississippi								
Biloxi	12,600	4	10	13	1 03	1	0 08	7 7
Jackson	23,700	2	38	21	89	1	04	4 8
Laurel	15,700			30	1 91			
Meridian	24,300	1	68	9	37			
Natchez	13,100			10	76	0		
Missouri								
Independence	12,700	2	71	30	2.36	0		
Joplin		6	32	22		3		13 6
Moberly	13,900	5	31	16	1 15	1	07	6 2
St Joseph	78,300	7	133	27	34	6	08	22 2
Springfield	42,100	4	72	69	1 64	8	19	11 6
Montana								
Anaconda	12,500	6	4	1	08	0		
Butte	42,900	7	48	44	1 03	6	14	13 6
Great Falls	29,900	7	62	91	3 04	8	27	8 8
Helena		3	9	23		2		8 7
Missoula		6	6	39		0		
Nebraska								
Grand Island	15,600	7	5	5	32			
Lincoln	60,900	7	83	62	1 02	4	07	6 5
North Platte	13,700	3	42	9	66	0		
New Hampshire								
Berlin	18,600	6	4	5	27	0		
Claremont		2	19	22		1		4 5
Concord	22,500	7	11	12	53	1	04	8 3
Dover		7	7	2		0		
Keene	11,900	6	7	11	92	0		
Manchester	83,100	7	189	30	36	7	08	23 3
Nashua	29,700	6	25	28	94	1	03	3 6
Portsmouth	14,900	7	21	4	27			
New Jersey								
Asbury Park	13,700	6	8	3	.22	0		
Bayonne	88,800	6	153	49	55	4	05	8 2
Belleville	18,900	7	24	3	16	0		
Bloomfield	26,000	7	34	15	58	1	.04	6 7
Bridgeton	14,400	6	23	12	83	0		
Carteret	14,000	2	20	5	36	2	.14	40.0
Clifton	34,700	5	68	192	5 53	13	.37	6 8
Collingswood		1	7	3				
Dover		2	4	1		1		100 0
East Orange	60,000	7	40	15	25	0		
Englewood	12,600	7	19	7	56	0		
Garfield	24,600	4	29	103	4 19	0		
Gloucester City	13,700	3	24	15	1 09	0		
Hackensack	19,700	7	22	12	.61	2	.10	16.7
Harrison	16,400	6	32	23	1.40			
Hoboken		5	123	74		5		6 8
Irvington	33,200	5	32	18	.54	0		
Kearny	31,300	7	38	32	1 02	2	06	6 2
Lodi		1	6	15				
Long Branch	13,600	7	9	10	.74	0		
Montclair	32,900	7	24	13	.40	1	.03	7 7
Morristown	12,600	7	13	3	.24	0		
New Brunswick	38,000	7	57	10	26	1	.03	10 0
Nutley				9		0		
Orange	35,400	5	48	13	.37	0		
Passaic	69,000	7	174	333	4.83	24	35	7 2
Perth Amboy	47,100	5	75	142	3.01	11	.23	7 7
Phillipsburg	18,600	4	40	26	1.40			
Plainfield	31,700	7	43	6	.19	0		
Rahway	12,000	7	37	8	.67	0		
Ridgefield Park		2	5	19		1		5 3
Rutherford		2	10	10		1		10 0
Summit	11,700	5	8	2	.17	0		
Union City	63,100			47	74			
West New York	39,200	7	62	73	1 86	3	08	4 1
West Orange	18,200	7	47	12	66	0		
New Mexico								
Albuquerque	21,000	2	53	10	48	2	10	20 0
New York								
Amsterdam	35,300	4	115	10	28	0		
Binghamton	71,900	6	64	32	45	5	.07	15.6
Cohoes	23,000	7	25	7	30	0		

Reported Prevalence for the Year 1925—Continued

DIPHTHERIA—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
New York—Continued.								
Corning	15,700	5	21	30	1 91	2	0 12	6 7
Cortland	13,900	7	14	16	1 15	3	22	18 7
Dunkirk	19,900	7	26	15	75	0	------	------
Elmira	48,400	5	38	11	23	1	02	9 9
Freeport	------	1	11	6	------	0	------	------
Geneva	15,900	5	44	18	1 13	1	06	5 6
Glens Falls	17,900	7	16	5	28	1	06	20 0
Gloversville	22,100	7	15	18	81	2	09	11 1
Hornell	15,800	6	12	4	25	0	------	------
Hudson	11,800	5	16	7	59	0	------	------
Ilion	10,400	2	15	29	2 79	3	29	10 3
Ithaca	18,900	7	13	4	21	0	------	------
Jamestown	43,400	7	109	62	1 43	1	02	1 6
Johnson City	------	1	7	4	------	0	------	------
Johnstown	10,700	4	5	4	37	0	------	------
Kingston	28,100	6	39	23	82	2	07	8 7
Lackawanna	20,200	7	62	73	3 61	5	25	6 8
Little Falls	12,400	7	23	11	89	2	.16	18 2
Lockport	21,700	5	11	8	37	1	.05	12 5
Middletown	20,400	7	10	11	54	1	05	9 9
Mount Vernon	50,400	7	78	12	24	1	02	8 3
New Rochelle	44,200	6	43	19	43	0	------	------
Newburgh	30,400	7	31	107	3 52	17	56	15 9
Niagara Falls	57,000	7	139	72	1 26	4	07	5 6
North Tonawanda	17,400	7	29	6	34	0	------	------
Olean	21,300	7	55	25	1 17	1	05	4.0
Peekskill	18,000	7	35	16	89	0	------	------
Plattsburg	11,600	7	9	------	------	4	34	------
Poughkeepsie	35,700	7	40	9	25	2	06	22 2
Rensselaer	11,400	3	14	4	35	1	.09	25 0
Rome	30,300	7	51	15	50	2	07	13 3
Salamanca	------	1	47	1	------	0	------	------
Saratoga Springs	13,900	7	15	10	72	1	07	10 0
Schenectady	92,800	7	153	38	41	3	03	7 9
Troy	72,200	7	127	111	1 54	11	.15	9 9
Watertown	32,800	7	32	19	58	1	03	5 3
Watervliet	16,200	5	55	10	62	0	------	------
White Plains	27,400	7	31	23	84	1	.04	4 3
North Carolina.								
Asheville	31,500	7	50	14	44	------	------	------
Charlotte	53,300	4	102	84	1 58	2	04	2 4
Greensboro	47,100	3	66	143	3 04	4	08	2.8
High Point	23,600	1	113	90	3 81	2	08	2 2
New Bern	12,200	2	20	7	57	1	08	14 3
Raleigh	30,400	7	79	31	1 02	3	10	9 7
Rocky Mount	15,100	5	55	106	7 02	4	26	3.8
Salisbury	17,700	3	40	25	1 41	1	06	4 0
Wilmington	37,100	6	40	20	54	5	13	25 0
Wilson	12,800	2	7	50	3 90	2	16	4 0
Winston-Salem	69,000	6	106	45	65	4	.06	8.9
North Dakota								
Fargo	24,900	6	27	25	1 00	3	.12	12 0
Ohio								
Alliance	25,000	4	25	30	1 20	0	------	------
Ashtabula	25,100	7	24	18	72	2	.08	11 1
Barberton	23,300	6	34	28	1 20	0	------	------
Bellaire	16,300	4	25	5	31	0	------	------
Bellefontaine	------	------	------	2	------	0	------	------
Bucyrus	11,700	5	34	3	26	0	------	------
Cambridge	14,000	5	18	21	1 50	0	------	------
Chillicothe	16,600	7	45	20	1 20	0	------	------
Cleveland Heights	22,200	3	13	38	1 71	2	09	5 3
Conneaut	------	2	9	2	------	1	------	50 0
Coshocton	11,600	5	11	4	34	1	09	25 0
Cuyahoga Falls	13,700	4	30	10	73	0	------	------
East Cleveland	37,600	7	32	37	98	0	------	------
East Liverpool	22,000	3	34	7	.32	0	------	------
East Youngstown (Campbell)	16,000	5	16	4	25	0	------	------
Elyria	23,800	6	24	26	1 09	2	08	7 7
Findlay	18,200	7	17	4	22	1	05	25 0
Fostoria	------	2	10	7	------	2	------	2 9
Fremont	13,900	7	4	9	65	1	07	11.1
Hamilton	42,400	7	29	32	75	4	09	12 5

Reported Prevalence for the Year 1925—Continued

DIPHTHERIA—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Ohio—Continued.								
Ironton	14,500	2	41	29	2.00	1	0 07	3 4
Kenmore	19,400	4	26	10	52	1	.05	10 0
Lakewood	56,800	4	28	51	90	2	04	3 9
Lancaster	16,100	5	14	14	87	0	------	------
Lima	46,700	7	70	27	58	0	------	------
Lorain	42,300	7	69	37	87	2	.05	5 4
Mansfield	31,800	7	21	32	1 01	4	13	12.5
Marietta	15,300	3	7	2	13	------	------	------
Marion	32,500	4	66	13	40	2	06	15.4
Martins Ferry	15,500	7	17	22	1 42	3	19	13 6
Middletown	30,800	7	34	105	3 41	0	------	------
Newark	30,500	7	19	10	33	0	------	------
Niles	16,600	5	46	12	72	0	------	------
Norwood	29,900	7	14	4	13	0	------	------
Piqua	16,000	7	9	17	1 06	0	------	------
Salem	11,100	5	23	9	81	2	18	22.2
Sandusky	24,500	7	15	32	1 31	2	08	6 2
Springfield	68,700	7	61	25	36	8	12	32 0
Steubenville	32,000	7	37	7	22	2	06	28 6
Zanesville	30,400	7	24	7	23	0	------	------
Oklahoma								
Ardmore	17,200	1	10	25	1 45	3	17	12.0
Guthrie	11,800	------	------	------	------	1	08	------
Okmulgee	25,300	1	10	33	1 30	3	12	9 1
Sapulpa	14,200	1	11	7	49	1	07	14 3
Oregon								
Astoria	16,500	7	4	7	42	1	06	14 3
Eugene	11,100	7	22	24	2 11	3	26	12.5
Pennsylvania								
Allentown	92,200	4	217	99	1 07	11	12	11 1
Altoona	66,100	7	136	84	1 27	8	12	9 5
Beaver Falls	13,100	4	25	8	61	------	------	------
Braddock	21,700	7	68	40	1.84	4	18	10 0
Bradford	15,800	6	8	13	82	2	.13	15 4
Butler	25,200	7	74	41	1 63	2	.08	4 9
Carbondale	19,500	7	29	7	36	------	------	------
Carlisle	11,400	7	9	5	44	------	------	------
Carnegie	12,400	4	25	7	56	0	------	------
Carrick	13,000	5	17	27	2 08	------	------	------
Chambersburg	13,900	7	11	2	.14	0	------	------
Charleroi	12,600	7	19	6	48	------	------	------
Clairton	14,900	2	8	8	.54	0	------	------
Coatesville	16,500	7	11	9	55	1	06	11 1
Columbia	------	------	------	2	------	------	------	------
Connellsville	14,300	6	33	8	56	------	------	------
Dubois	14,300	4	32	34	2.38	------	------	------
Duquesne	20,900	4	40	23	1.10	1	05	4 3
Easton	36,800	7	48	22	60	------	------	------
Farrell	18,700	5	45	27	1 44	3	16	11.1
Greensburg	16,100	1	12	8	50	0	------	------
Harrisburg	83,400	7	138	130	1 56	9	11	6 9
Hazleton	36,100	7	48	20	55	4	11	20.0
Homestead	21,400	7	36	18	84	0	------	------
Jeannette	11,700	5	25	28	2.39	2	17	7 1
Kingston	18,000	2	22	7	39	1	06	14 3
Lancaster	56,500	7	154	52	92	2	04	3 8
Lansford	------	4	20	8	------	------	------	------
Latrobe	------	1	19	8	------	1	------	12.5
Lewistown	------	3	35	26	------	2	------	------
McKees Rocks	18,100	3	65	20	1 10	2	.11	10 0
McKeesport	49,100	7	58	15	31	2	.04	13 3
Meadville	15,600	3	9	11	71	1	06	9 1
Monessen	21,200	6	63	31	1 46	3	14	9 7
Mount Carmel	------	3	38	29	------	0	------	------
Nanticoke	24,700	6	44	12	49	2	.08	16 7
New Castle	49,800	7	52	23	46	2	04	8 7
Norristown	34,800	7	58	22	63	4	11	18 2
North Braddock	16,700	7	37	35	2 10	8	48	22 9
Oil City	23,300	7	36	4	17	------	------	------
Olyphant	11,200	6	13	10	3 57	7	62	17 5
Phoenixville	------	4	14	2	------	------	------	------
Pittston	19,800	7	15	10	51	------	------	------
Plymouth	------	6	39	15	------	2	------	13.3

Reported Prevalence for the Year 1925—Continued

DIPHTHERIA—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Pennsylvania—Continued								
Pottstown	18,500	2	6	15	0 81	0		
Sharon	25,000	5	40	48	1 92	2	0 08	4 2
Steelton		7	25	7		0		
Sunbury	16,800	7	45	17	1 01	0		
Swissvale	12,900	5	35	8	.62			
Uniontown		6	40	13		0		
Vandergrift		1	8	2		1		50 0
Warren	15,100	7	22	9	60	0		
Washington	23,000	7	54	14	.61			
Waynesboro				9				
West Chester		7	13	6		0		
Wilkes-Barre	77,600	2	99	81	1 04	5	06	6 2
Wilkinsburg	27,400	3	34	3	11	1	04	33 3
Windber		1	26	28		4		14 3
Woodlawn	18,900	5	25	8	42	0		
York	49,100	6	156	14	29	1	02	7 1
Rhode Island								
Central Falls	25,400	4	24	15	.59			
Cranston	34,500	7	24	17	49	1	03	5 9
Newport	27,800	7	74	93	3 35	2	.07	2 2
Pawtucket	69,800	6	75	44	63	4	06	9 1
Woonsocket	49,700	1	8	8	16	0		
South Carolina:								
Anderson	11,100	4	12	5	45	2	18	40 0
Charleston	73,100	1	55	68	93	5	07	7 4
Florence	13,200	1	16	10	76	0		
Greenville	27,300	6	29	36	1 32	4	15	11 1
Spartanburg	25,500	4	43	40	1 57	3	12	7 5
Sumter		2	14	16		0		
South Dakota								
Aberdeen	15,000	4	32	6	40			
Sioux Falls	30,100	7	35	46	1 53	5	17	10 9
Tennessee								
Chattanooga	66,600	4	84	59	89			
Knoxville	95,500	7	77	47	49	6	06	12 8
Texas								
Amarillo	17,800	6	15	10	56	0		
Beaumont	50,600	5	19	55	1 09	0		
Cleburne	14,200	5	5	5	35	0		
Corpus Christi	11,800	3	6	12	1 02	3	25	25 0
Eastland		1	5	1		0		
Galveston	48,400	7	42	44	91	2	04	4 5
Greenville	14,400			20	1 39	1	.07	5 0
Orange		1	10	12		0		
Palestine	11,400			6	53			
San Angelo						1		
Texarkana	12,400	6	15	9	73	0		
Tyler	13,000	7	11	7	54	0		
Waco	43,900	6	48	15	34	3	07	20 0
Utah								
Ogden	36,900	7	33	140	3 79	3	.08	2 1
Provo	11,200	2	23	19	1.70	0		
Vermont:								
Barre		6	5	15		1		6 7
Bennington		2	3	4		0		
Burlington	24,100	6	23	23	95	0		
Rutland	15,800	4	7	23	1 46	1	06	4.3
Virginia								
Alexandria	18,500	6	9	26	1 41	1	05	3 8
Charlottesville	11,200	4	12	16	1 43	0		
Danville	23,000	7	53	69	3 00	1	04	1.4
Lynchburg	30,400	6	84	79	2 60	1	03	1 3
Newport News	47,100	6	36	13	28	2	04	15 4
Petersburg	35,700	7	69	32	90	1	03	3.1
Portsmouth	59,000	7	77	10	17	0		
Roanoke	58,200	6	101	174	2 99	11	.19	6 3
Suffolk				3		0		
Washington:								
Aberdeen	16,200	6	4	3	.19	0		
Bremerton		2	8	15		1		6.7
Everett	29,300	7	10	9	.31	0		
Hoquiam	11,100	1	12	18	1 62	1	.09	5.6
Vancouver	14,500	6	18	26	1 79	0		
Walla Walla		3	11	11		0		
Yakima	22,700	7	17	37	1.63	2	.09	5.4

Reported Prevalence for the Year 1925—Continued

DIPHTHERIA—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
West Virginia								
Bluefield	19,300	4	54	19	0 98	0		
Charleston	49,000	7	91	49	1 00	0		
Clarksburg	30,400	3	57	11	.36	2	0 07	18 2
Fairmont	21,000	7	69	41	1.95			
Huntington	63,500	4	103	52	.82			
Martinsburg	13,500	5	13	19	1.41	1	.07	5 3
Morgantown	13,800	2	17	9	.65	3	.22	33 3
Parkersburg	21,300	5	56	15	70	2	.09	13 3
Wheeling		7	101	56		4		7 1
Wisconsin								
Appleton	21,100	5	28	22	1 04	0		
Ashland		6	16	18				
Beloit	24,800	7	39	39	1 57	0		
Eau Claire	22,400	7	22	11	49	0		
Fond du Lac	26,000	7	28	118	4 54	8	.31	6 8
Green Bay	34,300	7	70	31	90	1	03	3 2
Janesville	20,800	6	21	3	14	0		
Kenosha	50,900	7	121	62	1 22	5	10	8 1
La Crosse	30,400	6	20	6	20	0		
Madison	46,400	7	71	26	56			
Manitowoc	22,100	5	21	22	1 00	0		
Marinette		7	12	3		0		
Oshkosh	33,200	6	25	38	1 14	2	06	5 3
Racine	67,700	6	163	102	1 51	1	01	1 0
Sheboygan	33,500	6	109	38	1 13	2	06	5 3
Superior		6	40	16		1		6 2
Waukesha	14,700	1	22	5	34	0		
Wausau	20,100	7	19	3	.15	0		
West Allis	18,400	5	40	70	3 80	3	.16	4.3
Wyoming								
Cheyenne	15,500			14	.90	2	.13	14 3

INFLUENZA

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama.						
Anniston	20,500	97	4.73	5	0.24	19 4
Dothan	14,500	205	14.14	7	.48	29.3
Florence	12,700	54	4.25	3	.24	18.0
Mobile	66,000	111	1.68	49	.74	2 3
Montgomery	46,500	47	1.01	11	.24	4.3
Selma	17,000			20	1 18	
Tuscaloosa	13,100	112	8.55	1	.08	112.0
Arizona						
Phoenix	38,700			38	.98	
Tucson	26,700			5	.19	
Arkansas						
Little Rock	74,200	131	1.77	24	.32	5.5
California						
Alameda	31,900	13	.41	1	.03	13 0
Alhambra		15		1		15 0
Bakersfield	23,500	6	.26	4	.17	1 5
Berkeley	66,200	100	1.51	8	.12	12.5
Chico				3		
Eureka	13,500			1	.07	
Fresno	58,500	4	.07	2	.03	2.0
Glendale	21,300	10	.47	2	.09	5 0
Long Beach	91,200	47	.52	8	.09	5.9
Pasadena	56,700	33	.58	5	.09	6.6
Pomona	15,400	1	06	0		
Richmond	22,500	4	.18	2	09	2.0
Riverside		28		2		14.0
Sacramento	72,300			17	.24	

Reported Prevalence for the Year 1925—Continued

INFLUENZA—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
California—Continued						
San Bernardino	22,800			4	0 18	
San Jose	43,600			1	.02	
Santa Ana	19,500	5	0 26	4	21	1 2
Stockton	47,300	37	78	14	30	2.6
Colorado						
Boulder	11,800	4	34	0		
Colorado Springs		65		9		7 2
Greeley	12,500			5	40	
Pueblo	43,800			16	37	
Trinidad	11,000			9	82	
Connecticut						
Danbury		5		0		
Fairfield	14,500	4	28	1	07	4 0
Greenwich	25,300	4	.16	0		
Manchester	21,000	7	33			
Meriden	36,300	7	19			
New Britain	68,000	18	26	4	06	4 5
New London	29,100	13	45	1	03	13 0
Shelton				2		
Florida						
St Petersburg	26,800			4	.15	
Tampa	94,700	63	67	19	20	3 3
West Palm Beach				2		
Georgia						
Albany	13,500	10	74	8	59	1 2
Augusta	55,200	51	92	2	04	25 5
Brunswick	16,800	109	6 49	4	24	27 2
Lagrange	23,500			7	30	
Rome	13,900	418	30 07	3	.22	139 3
Savannah	93,100	665	7 14	50	54	13.3
Idaho						
Pocatello	18,300	100	5.46	0		
Illinois						
Aurora	40,300			1	02	
Blue Island	13,200			4	30	
Champaign	18,200			1	.05	
Cicero	62,200	8	.13	2	03	4 0
Danville	37,000	24	65	0		
Decatur	53,900			4	07	
East St Louis	71,400	2	03	0		
Elgin	33,400			1	03	
Evanston	43,900	7	.16	5	11	1 4
Freeport	20,700	6	29	1	05	6 0
Galesburg	24,800			2	08	
Granite City	18,200			8	44	
Jacksonville	15,900	3	19	1	06	3.0
Joliet	40,600			4	10	
Kewanee	19,700	3	15	2	.10	1 5
La Salle	13,900	3	22	2	14	1 5
Moline	33,900	5	.15	4	12	1.2
Oak Park	51,400	11	21	1	.02	11 0
Pekin	13,300			4	30	
Peoria	81,600			16	20	
Quincy		13		2		6 5
Rock Island	40,000	2	05	1	.02	2 0
Rockford	76,500	10	.13	8	10	1.2
Springfield	63,900			45	.70	
Waukegan	22,000	2	09			
Indiana						
Bloomington	12,600	24	1 90	6	48	4 0
Connersville	12,500	60	4 80	8	64	7 5
Crawfordsville	10,500			1	10	
East Chicago	45,600			10	22	
Elwood				2		
Fort Wayne	97,800			6	06	
Gary	76,900			3	04	
Hammond	50,400			10	20	
Jeffersonville		5		0		
Kokomo	36,900			9	24	
Marion	26,300			9	34	
Michigan City	20,300			2	10	
Mishawaka	16,700			12	72	
Muncie	42,500			8	.19	
New Albany				6		
Newcastle	17,000			2	12	
Peru	12,700			3	.24	
Richmond	30,500			3	10	

Reported Prevalence for the Year 1925—Continued

INFLUENZA—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Iowa						
Cedar Rapids	50,600			19	0 38	
Council Bluffs	39,800			6	.15	
Dubuque	41,000			2	.05	
Muscatine	16,800			4	24	
Kansas						
Emporia	12,200	9	0 74	0		
Independence	10,900			2	18	
Lawrence	12,300	5	41	4	33	1 2
Parsons	14,800			3	20	
Pittsburg	19,200	8	42	7	36	1 1
Topeka	55,400	16	29	3	.05	5 3
Kentucky						
Covington	58,300	15	26	14	24	1 1
Henderson	12,600	1	08	0		
Newport		29		19		1 5
Paducah	25,900	32	1 24	7	27	4 6
Louisiana						
Baton Rouge	27,800			9	.32	
Lake Charles		7		4		1 7
Shreveport	57,900			[1] 19	33	
Maine						
Auburn	18,100	2	11	0		
Bangor	26,600			2	.08	
Bath	17,800	37	2.08	0		
Biddeford	18,500	19	1 03	3	16	6 3
Lewiston	34,900			7	20	
Portland	75,300	21	28	8	.11	2 6
Sanford	11,600			5	43	
Waterville	14,400			4	28	
Massachusetts						
Amesbury	11,200	10	89	1	09	10.0
Arlington	24,900	4	16	0		
Athol				3		
Attleboro	20,600	2	10	2	10	1 0
Belmont	15,300	1	07	1	.07	1 0
Beverly	22,700	2	09	0		
Braintree	13,200	1	.08	0		
Brookline	42,700	5	.12	4	.09	1 2
Chelsea	47,200	6	13	1	.02	6 0
Chicopee	41,900			3	07	
Clinton	14,200	1	07	0		
Danvers	11,800	3	25	2	.17	1 5
Dedham	13,900	1	.07	0		
Everett	42,100	5	12	4	10	1 2
Framingham	21,100	7	33	3	14	2.3
Gloucester	23,400			1	04	
Greenfield	15,200	20	1.32	4	26	5 0
Haverhill	49,200	15	.30	5	.10	3 0
Holyoke	60,300	5	08	3	.05	1 7
Lawrence	93,500	12	.13	11	12	1 1
Malden	51,500	32	62	5	.10	6.4
Marlboro	16,200	2	.12	2	12	1 0
Medford	47,600	10	21	2	.04	5.0
Methuen	20,600	83	4.03	1	.05	83.0
Milford	14,800	2	14	0		
Newburyport	15,700	7	.45	0		
North Adams	22,700	3	.13	1	04	3 0
Northampton	24,100	[1] 3	12	[1] 3	.12	1 0
Northbridge	10,100	5	50	0		
Peabody	19,900	1	05	1	.05	1 0
Pittsfield	46,900	5	.11	5	.11	1.0
Quincy	60,100	165	2.75	9	.15	18 3
Salem	42,800	25	58	3	.07	8.3
Saugus	12,700	10	79	2	.16	5.0
Somerville	99,000	19	.19	2	.02	9 5
Southbridge	15,500	3	19	1	.06	3.0
Taunton	39,300	1	03	0		
Waltham	34,700	12	35	4	.12	3.0
Watertown	25,500	4	.16	1	.04	4.0
West Springfield	15,300	3	20			
Westfield	19,300	7	36	4	.21	1.7
Winchester	11,600	2	17	1	.09	2.0
Winthrop	16,200	3	19	0		
Woburn	18,400	5	27	1	.05	5 0

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

INFLUENZA—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Michigan						
Bay City	48,900			1	0 02	
Cadillac				2		
Hamtramck	81,700	1	0 01	1	01	1 0
Highland Park	72,300	8	11	3	04	2 7
Ironwood	17,400	11	63	2	12	5 5
Kalamazoo	53,600	25	47	15	28	1 7
Lansing	70,800	5	07	4	06	1 2
Muskegon	43,100			4	09	
Pontiac	47,500	2	04	2	04	1 0
Port Huron	30,000	2	07			
Saginaw	72,100			2	03	
Sault Ste Marie				1		
Minnesota						
Brainerd				2		
Faribault	12,300			2	16	
Hibbing	18,000			2	11	
Mankato	13,700			2	15	
Rochester	17,000			11	65	
Virginia	16,000	3	19	3	19	1 0
Winona	19,500	4	21			
Mississippi						
Biloxi	12,600	102	8 10	6	48	17 0
Jackson	23,700	1,206	50 89	11	46	109 6
Laurel	15,700	278	17 69			
Meridian	24,300	383	15 76			
Natchez	13,100	270	20 61	10	76	27 0
Missouri						
Independence	12,700			8	64	
Moberly	13,900			3	22	
St Joseph	78,300			20	26	
Springfield	42,100	12	29	8	19	1 5
Montana						
Anaconda	12,500			3	24	
Butte	42,900	2	05	2	05	1 0
Great Falls	29,900			4	13	
Nebraska						
Lincoln	60,900			10	16	
North Platte	13,700	3	22	3	22	1.0
New Hampshire.						
Claremont				4		
Concord	22,500			1	04	
Dover				2		
Keene	11,900	1	08	0		
Manchester	83,100			54	65	
Nashua	29,700			8	27	
Portsmouth	14,900	11	74			
New Jersey						
Asbury Park	13,700	1	07	0		
Bayonne	88,800			16	.18	
Belleville	18,900	3	16	0		
Bloomfield	26,000	2	08	0		
Bridgeton	14,400			3	21	
Clifton	34,700	5	14	0		
East Orange	60,000	5	08	2	.03	2.5
Hackensack	19,700	1	05	1	05	1.0
Harrison	16,400	16	98			
Irvington	33,200	11	33	1	.03	11.0
Kearny	31,300	12	38	0		
Long Branch	13,600	4	29	0		
Montclair	32,900	12	36	1	.03	12.0
Nutley		1		0		
Orange	35,400	5	.14	2	.06	2.5
Passaic	69,000			4	06	
Phillipsburg	18,600	3	16			
Plainfield	31,700			1	.03	
Red Bank		1		1		
Rutherford		3		0		
Summit	11,700	1	09	0		
West New York	39,200	2	05	2	05	1 0
West Orange	18,200	11	60	0		
New Mexico.						
Albuquerque	21,000	11	52	5	24	2.2
New York:						
Amsterdam	35,300	208	5 89	3	.08	69.3
Binghamton	71,900	43	60	0		
Cohoes	23,000	15	.65	0		
Cortland	13,900	3	22	1	.07	3.0

Reported Prevalence for the Year 1925—Continued

INFLUENZA—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
New York—Continued						
Dunkirk	19,900	70	3 52	1	0 05	70 0
Elmira	48,400			3	06	
Freeport		4				
Geneva	15,900	2	13	2	13	1 0
Glens Falls	17,900			1	06	
Hornell	15,800			2	13	
Hudson	11,800	2	. 17	0		
Jamestown	43,400	2	05	2	05	1 0
Johnson City		1		1		1 0
Johnstown	10,700	3	28	1	09	3.0
Kingston	28,100			2	07	
Lackawanna	20,200	8	40	0		
Little Falls	12,400	7	56	0		
Mount Vernon	50,400	10	20	3	06	3 3
New Rochelle	44,200	1	02	0		
North Tonawanda	17,400	1	06	0		
Olean	21,300	3	14	0		
Peekskill	18,000	10	56	0		
Plattsburg	11,600			1	09	
Rome	30,300	3	10	2	07	1 5
Salamanca				1		
Saratoga Springs	13,900	169	12 16	0		
Schenectady	92,800			22	24	
Watertown	32,800			6	18	
Watervliet	16,200			1	06	
White Plains	27,400	5	18	1	04	5 0
North Carolina						
Charlotte	53,300			12	23	
Greensboro	47,100			9	19	
High Point	23,600			10	.42	
New Bern	12,200			4	.33	
Raleigh	30,400			5	.16	
Rocky Mount	15,100			3	20	
Wilmington	37,100			5	13	
Wilson	12,800			5	39	
Winston-Salem	69,000			13	19	
Ohio						
Barberton	23,300	1	04	0		
Cambridge	14,000			4	29	
Conneaut		9				
Cuyahoga Falls	13,700	22	1 61	6	.44	3 7
East Cleveland	37,600	7	.19	0		
East Youngstown (Campbell)	16,000			1	06	
Elyria	23,800			1	04	
Findlay	18,200	4	.22	3	16	1 3
Hamilton	42,400			9	21	
Kenmore	19,400	3	15	2	10	1 5
Lakewood	56,800	4	07	4	07	1 0
Lima	46,700			8	.17	
Lorain	42,300	4	09	3	.07	1 3
Mansfield	31,800			7	22	
Marietta	15,300			5	33	
Marion	32,500			23	71	
Martins Ferry	15,500			3	19	
Newark	30,500			9	30	
Niles	16,600			2	12	
Norwood	29,900			4	13	
Salem	11,100			5	.45	
Sandusky	24,500			1	04	
Springfield	68,700			14	.20	
Steubenville	32,000	4	.12	1	03	4.0
Zanesville	30,400	10	.33	5	16	2 0
Oklahoma						
Ardmore	17,200	294	17.09	11	.64	26 7
Guthrie	11,800			3	.25	
Okmulgee	25,300	80	3 16	6	24	13.3
Sapulpa	14,200	15	1 06	0		
Oregon						
Eugene	11,400	13	1 14	2	.18	6.5
Pennsylvania						
Allentown	92,200			4	.04	
Altoona	66,100			1	.02	
Braddock	21,700	8	37	5	.23	1.6
Bradford	15,800			3	.19	
Canonsburg	13,500	2	15	2	.15	1 0

Reported Prevalence for the Year 1925—Continued

INFLUENZA—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Pennsylvania—Continued						
Carnegie	12,400			1	0 08	
Connellsville	14,300			3	21	
Easton	36,800			2	05	
Harrisburg	83,400			5	06	
Homestead	21,400			1	05	
Kingston	18,000			5	28	
Lancaster	56,500			10	18	
Lewistown				1		
McKees Rocks	18,100	11	0 61	0		
McKeesport	49,100			7	14	
Nanticoke	24,700			4	16	
New Castle	49,800			10	20	
Norristown	34,800			1	03	
North Braddock	16,700			3	18	
Olyphant	11,200			5	.45	
Pottstown	18,500			6	32	
Sharon	25,000			6	24	
Sunbury	16,800	140	8.33	2	.12	70 0
Swissvale	12,900			1	08	
Vandergrift				5		
Wilkes-Barre	77,600			8	10	
Wilkinsburg	27,400			8	29	
Windber				5		
Woodlawn	18,900			2	11	
Rhode Island						
Newport	27,800			3	.11	
Pawtucket	69,800			3	04	
South Carolina						
Charleston	73,100			23	.31	
Greenville	27,300			5	18	
Spartanburg	25,500			4	.16	
Sumter				7		
South Dakota						
Sioux Falls	30,100	1	.03	1	.03	1 0
Tennessee:						
Chattanooga	66,600	23	35			
Knoxville	95,500			46	48	
Texas						
Beaumont	50,600			4	08	
Cleburne	14,200	30	2 11	0		
Corpus Christi	11,800	100	8 47	10	85	10 0
Galveston	48,400	10	21	0		
Greenville	14,400			5	.35	
Orange		195		1		195 0
Palestine	11,400	105	9.21			
San Angelo				10		
Texarkana	12,400	25	2 02	0		
Waco	43,900	46	1 05	21	48	2 2
Utah:						
Ogden	36,900	1	03	1	03	1 0
Provo	11,200			3	.27	
Vermont:						
Barre				1		
Virginia:						
Alexandria	18,500			2	11	
Danville	23,000			10	43	
Lynchburg	30,400			21	69	
Petersburg	35,700			22	62	
Portsmouth	59,000			3	05	
Roanoke	58,200			15	26	
Suffolk				7		
Washington:						
Bremerton		123		0		
Walla Walla				2		
Yakima	22,700			15	.66	
West Virginia.						
Bluefield	19,300			8	.41	
Charleston	49,000			5	.10	
Clarksburg	30,400			13	.43	
Martinsburg	13,500			3	.22	
Morgantown	13,800			5	36	
Parkersburg	21,300			8	.38	
Wheeling				13		
Wisconsin						
Beloit	24,800			1	.04	
Green Bay	34,300			3	.09	

Reported Prevalence for the Year 1925—Continued

INFLUENZA—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Wisconsin—Continued						
Kenosha	50,900	4	0 08	1	0 02	4 0
La Crosse	30,400	3	10	0		
Madison	46,400	2	04			
Marinette				4		
Racine	67,700	7	10	3	04	2 3
Sheboygan	33,500			8	24	
Waukesha	14,700	3	20	0		
Wausau	20,100			1	05	
West Allis	18,400			2	11	
Wyoming						
Cheyenne	15,500	4	26	4	26	1 0

LETHARGIC ENCEPHALITIS

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama						
Anniston	20,500	1	0 05	0		
Mobile	66,000	1	02	1	0 02	1 0
Arkansas						
Little Rock	74,200	3	04	2	03	1 5
California						
Alameda	31,900	2	06	2	06	1 0
Alhambra		1		0		
Bakersfield	23,[illegible]00	2	09	0		
Berkeley	66,200	4	06	3	05	1 3
Glendale	21,300	2	09	1	05	2 0
Long Beach	91,200			1	01	
Pomona	15,400	2	13	0		
Sacramento	72,200	2	03	2	03	1 0
San Bernardino	22,800			1	04	
Santa Ana	19,[illegible]00			3	15	
Santa Monica	19,400			1	05	
Stockton	47,300	1	02	0		
Colorado						
Colorado Springs		1		1		1 0
Pueblo	43,800			1	.02	
Trinidad	11,000			1	09	
Connecticut						
Danbury		2		0		
Greenwich	25,300	2	08	0		
New Britain	68,000	5	07	2	03	2 5
Stratford	16,100	1	.06	1	06	1.0
Florida						
St Petersburg	26,800	1	04	0		
Tampa	94,700			3	.03	
Georgia						
Augusta	55,200			3	05	
Illinois						
Berwyn	18,900	1	05	1	05	1 0
Bloomington	30,400	1	03	1	03	1 0
Evanston	43,900	4	.09	0		
Galesburg	24,800	3	.12	2	.08	1 5
La Salle	13,900	1	07	1	07	1 0
Moline	33,900	1	03	0		
Oak Park	51,400	3	.06	0		
Pekin	13,300	5	38	0		
Peoria	81,600			2	02	
Rock Island	40,000	2	05	1	02	2 0
Indiana						
Kokomo	36,900			1	.03	
Michigan City	20,300			1	05	
Muncie	42,500	1	0 2	1	.02	1 0
Iowa						
Muscatine	16,800	3	.18	1	.06	3 0
Kansas						
Lawrence	12,300	3	.24	2	16	1 5
Topeka	55,400	2	.04	0		
Kentucky						
Covington	58,300			4	.07	
Louisiana						
Shreveport	57,900	2	.03	0		

Reported Prevalence for the Year 1925—Continued

LETHARGIC ENCEPHALITIS—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Maine						
Lewiston	34,900			2	0 06	
Portland	75,300			1	.01	
Massachusetts.						
Attleboro	20,600	2	0 10	2	10	1 0
Belmont	15,300	1	07	0		
Beverly	22,700	3	.13	2	09	1 5
Brockton	65,300	3	05	1	02	3 0
Brookline	42,700	2	05	2	05	1 0
Chelsea	47,200	2	04	0		
Clinton	14,200	1	07	1	07	1 0
Everett	42,100	2	05	0		
Gloucester	23,400			1	04	
Greenfield	15,200			1	07	
Haverhill	49,200	6	12	3	06	2 0
Holyoke	60,300	1	02	1	02	1 0
Leominster	22,100	1	05	0		
Malden	51,800	3	06	0		
Medford	47,600	3	06	0		
Methuen	20,600	2	10	2	.10	1 0
Newburyport	15,700	2	13	0		
Northampton	24,100	[1] 9	37	[1] 3	.12	3 0
Peabody	19,900	1	05	0		
Quincy	60,100	1	02	0		
Salem	42,800	2	05	2	.05	1 0
Taunton	39,300	1	03	0		
Waltham	34,700	2	06	0		
Michigan:						
Ann Arbor	22,200	1	05	1	05	1 0
Battle Creek	42,300	3	07	0		
Bay City	48,900	2	.04	2	.04	1 0
Highland Park	72,300	2	03	1	01	2 0
Ishpeming				1		
Kalamazoo	53,600	3	06	2	.04	1 5
Marquette	13,400	2	15	2	.15	1 0
Muskegon	43,100	1	02	1	02	1 0
Port Huron	30,000	1	03	1	03	1 0
River Rouge		3		3		1 0
Minnesota:						
Virginia	16,000	1	06	1	06	1 0
Missouri						
Moberly	13,900	1	07	0		
St Joseph	78,300			5	06	
Montana						
Butte	42,900			3	07	
Great Falls	29,900			1	03	
Nebraska						
Lincoln	60,900	3	02	1	02	2 0
New Hampshire						
Manchester	83,100			1	.01	
New Jersey						
Belleville	18,900	1	05	0		
Bloomfield	26,000	2	08	1	.04	2 0
Carteret	14,000	1	07	1	.07	1 0
Clifton	34,700	1	03	1	03	1 0
East Orange	60,000	4	07	2	.03	2.0
Englewood	12,600	2	16	2	16	1 0
Garfield	24,600	2	08	1	04	1 0
Irvington	33,200	1	03	1	03	1 0
Kearny	31,300	1	03	1	.03	1.0
Long Branch	13,600			1	07	
Montclair	32,900	3	.09	1	.03	3 0
New Brunswick	38,000	1	03	1	03	1.0
Orange	35,400	3	08	1	03	3 0
Passaic	69,000			1	01	
Rahway	12,000			1	.08	
Summit	11,700	3	26	0		
New York:						
Amsterdam	35,300	2	06	2	.06	1.0
Binghamton	71,900	6	08	1	.01	6.0
Elmira	48,400			3	.06	
Geneva	15,900	2	13	0		
Glens Falls	17,900	2	11	1	.06	2.0
Gloversville	22,100	1	05	0		
Hudson	11,800			3	.25	

[1] Includes nonresidents

Reported Prevalence for the Year 1925—Continued

LETHARGIC ENCEPHALITIS—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
New York—Continued						
Ithaca	18,900	3	0.16	0		
Jamestown	43,400	2	.05	2	0.05	1.0
Middletown	20,400	1	.05	0		
Mount Vernon	50,400			2	.04	
New Rochelle	14,200			2	.05	
Newburgh	30,[illegible]00	3	.10	2	.07	1.5
Olean	21,300	2	.09	0		
Peekskill	18,000	2	.11	1	.06	2.0
Poughkeepsie	35,700	2	.06	1	.03	2.0
Salamanca				2		
Schenectady	92,800	5	.05	5	.05	1.0
North Carolina						
Greensboro	47,100	2	.04	2	.04	1.0
Winston-Salem	69,000	2	.03	2	.03	1.0
Ohio						
Cambridge	14,000			2	.14	
Conneaut		1				
East Cleveland	37,600	2	.05	2	.05	1.0
Findlay	18,200	1	.05	1	.05	1.0
Kenmore	19,400	1	.05	0		
Lorain	42,300	2	.05	1	.02	2.0
Middletown	30,800	3	.10	2	.06	1.5
Steubenville	32,000	1	.03	1	.03	1.0
Zanesville	30,400	1	.03	1	.03	1.0
Oregon						
Astoria	16,500			1	.06	
Eugene	11,400			2	.18	
Pennsylvania						
Allentown	92,200	3	.03	3	.03	1.0
Canonsburg	13,500			1	.07	
Homestead	21,400			2	.09	
Jeannette	11,800	1	.09	1	.09	1.0
McKeesport	49,100			1	.02	
Sharon	25,000			1	.04	
West Chester		1		0		
Wilkes-Barre	77,600			2	.03	
Windber				1		
York	49,100	2	.04	1	.02	2.0
South Carolina						
Charleston	73,100			2	.03	
South Dakota						
Sioux Falls	30,100	1	.03	1	.03	1.0
Tennessee						
Knoxville	95,500			1	.01	
Texas						
Amarillo	17,800	1	.06	1	.06	1.0
Beaumont	50,600			2	.04	
Galveston	48,400			2	.04	
Waco	43,900			1	.02	
Utah						
Logan		2		1		2.0
Virginia						
Alexandria	18,500			[1]2	.11	
Lynchburg	30,400			1	.03	
Petersburg	35,700	3	.08	3	.08	1.0
Roanoke	58,200			2	.03	
Washington						
Aberdeen	16,200	1	.06	1	.06	1.0
Vancouver	14,500	1	.07	0		
Walla Walla				2		
West Virginia						
Bluefield	19,300			4	.21	
Martinsburg	13,500	1	.07	0		
Morgantown	13,800			1	.07	
Wheeling				1		
Wisconsin						
Eau Claire	22,400	2	.09	0		
La Crosse	30,400			[1]3	.10	
Oshkosh	33,200	2	.06	2	.06	1.0
Racine	67,700	2	.03	2	.03	1.0
West Allis	18,400			2	.11	

[1] Includes nonresidents

Reported Prevalence for the Year 1925—Continued

MALARIA

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama						
Anniston	20,500	1	0 05	0		
Dothan	14,500	23	1 59	0		
Florence	12,700	20	1 57	0		
Mobile	66 000	10	15	2	0 03	5 0
Montgomery	46,500	11	24	3	06	3 7
Selma	17,000			2	12	
Tuscaloosa	13,100	4	31	0		
Arkansas						
Hot Springs		6				
Little Rock	74,200	136	1 83	8	11	17 0
California						
Chico		1				
Sacramento	72,300	2	03	0		
Santa Ana	19,500	3	15	0		
Santa Barbara	24,000	1	04	0		
Stockton	47,300	3	06	0		
Connecticut						
Greenwich	25,300	3	12	0		
Manchester	21,000	2	10			
New Britain	68,000	10	15	1	01	10 0
Florida						
St Petersburg	26,800	15	56	1	.04	15 0
Tampa	94,700	21	22	4	04	5 2
Georgia						
Albany	13,500	23	1 70	7	52	3 3
Augusta	55,200			6	11	
Brunswick	16,800	9	54	2	12	4.5
Lagrange	23,500			1	.04	
Rome	13,900	18	1 29	0		
Savannah	93,100	23	25	0		
Illinois						
Alton	26,800	2	07	1	04	2 0
Danville	37,000	2	05	0		
Granite City	18,200			1	05	
Oak Park	51,400	1	02	0		
Kansas:						
Emporia	12,200	38	4 75	0		
Topeka	55,400	2	04	0		
Kentucky						
Paducah	25,900			1	04	
Louisiana						
Lake Charles		1		0		
Shreveport	57,900			5	09	
Maine.						
Portland	75,300			1	01	
Massachusetts						
Amesbury	11,200	4	36	0		
Brookline	42,700	1	02	0		
Medford	47,600	1	02	0		
Milton		1				
Northbridge	10,100	2	20	0		
Woburn	18,400	2	11	0		
Michigan						
Saginaw	72,100	1	01	0		
Mississippi.						
Biloxi	12,600	5	40	0		
Jackson	23,700	997	42 07	4	.17	249 2
Laurel	15,700	427	27 17			
Meridian	24,300	270	11 11			
Natchez	13,100	320	24 43	2	15	160.0
Missouri						
Springfield	42,100	1	02	1	.02	1 0
New Jersey.						
Hackensack	19,700	1	05	0		
Irvington	33,200	2	06	0		
New York:						
Binghamton	71,900	2	.03	0		
Glens Falls	17,900	1	.06	0		
Kingston	28,100	1	04	0		
Olean	21,300	1	05	0		
Poughkeepsie	35,700	2	.06	0		
Saratoga Springs	13,900	2	.14	1	.07	2.0

Reported Prevalence for the Year 1925—Continued

MALARIA—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
North Carolina						
Greensboro	47,100	2	0.04	1	0.02	2.0
New Bern	12,200			2	.16	
Wilson	12,800			2	.16	
Winston-Salem	69,000	2	.03	1	.01	2.0
Ohio						
East Cleveland	37,600	1	.03	0		
Oklahoma						
Ardmore	17,200	38	2.21	4	.23	9.5
Okmulgee	25,300	55	2.17	0		
Sapulpa	14,200	20	1.41	1	.07	20.0
Pennsylvania						
Allentown	92,200	2	.02	0		
South Carolina						
Charleston	73,100			4	.05	
Tennessee						
Chattanooga	66,600	7	.11			
Texas						
Beaumont	50,600			5	.10	
Cleburne	14,200	20	1.41	0		
Orange		16		0		
Palestine	11,400	36	3.16			
Texarkana	12,400	75	6.05	0		
Waco	43,900	2	.05	1	.02	2.0
Utah						
Logan		1		0		
Virginia						
Alexandria	18,500	5	.27	0		
Danville	23,000	8	.35	0		
Petersburg	35,700			1	.03	
Portsmouth	59,000			1	.02	

MEASLES

City	Estimated population July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Alabama								
Anniston	20,500	7	34	1	0.05	0		
Montgomery	46,500			5	.11	0		
Tuscaloosa	13,100			61	4.66	0		
Arizona								
Phoenix	38,700			42	1.09	2	0.05	4.8
Tucson	26,700	5	18	38	1.42	0		
Arkansas:								
Hot Springs				4				
Little Rock	74,200	5	238	84	1.13	3	.04	3.6
California								
Alameda	31,900	7	163	11	.34	0		
Alhambra		2	178	9		0		
Bakersfield	23,500	6	34	4	.17	0		
Berkeley	66,200			17	.26	0		
Eureka	13,500	7	38	9	.67	0		
Fresno	58,500			7	.12	0		
Glendale	21,300	5	235	16	.75	1	.05	6.2
Long Beach	91,200	7	288	27	.30	0		
Pasadena	56,700	5	350	35	.62	1	.02	2.9
Pomona	15,400	5	131	23	1.49	0		
Richmond	22,500	5	18	1	.04	0		
Riverside		5	37	9		0		
Sacramento	72,300	7	288	17	.24	1	.01	5.9
San Bernardino	22,800	7	137	5	.22	0		
San Jose	43,600	5	241	26	.60	0		

Reported Prevalence for the Year 1925—Continued

MEASLES—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
California—Continued								
Santa Ana	19,500	5	23	12	0 62	0	-------	-------
Santa Barbara	24,000	5	17	10	42	0	-------	-------
Stockton	47,300	-------	-------	5	11	0	-------	-------
Vallejo	26,600	3	18	2	08	0	-------	-------
Colorado								
Boulder	11,800	6	88	15	1 27	0	-------	-------
Colorado Springs	-------	7	265	21	-------	0	-------	-------
Greeley	12,500	2	49	7	.56	0	-------	-------
Pueblo	43,800	3	207	7	.16	0	-------	-------
Trinidad	11,000	7	98	13	1 18	0	-------	-------
Connecticut								
Danbury	-------	4	50	3	-------	0	-------	-------
Fairfield	14,500	3	34	7	48	0	-------	-------
Greenwich	25,300	7	417	4	16	0	-------	-------
Manchester	21,000	6	33	7	33	-------	-------	-------
Meriden	36,300	5	63	15	41	-------	-------	-------
Milford	13,500	5	59	31	2 30	0	-------	-------
New Britain	68,000	7	314	235	3 46	2	0 03	0 9
New London	29,100	7	44	13	45	0	-------	-------
Norwich	23,100	7	11	35	1 52	0	-------	-------
Shelton	-------	1	85	68	-------	2	-------	2.9
Stamford	40,700	3	480	94	2 31	2	05	2 1
Stratford	16,100	4	50	70	4 35	0	-------	-------
Florida.								
St. Petersburg	26,800	2	50	58	2 16	1	04	1 7
Tampa	94,700	4	176	4	04	1	01	25 0
West Palm Beach	-------	2	47	6	-------	0	-------	-------
Georgia.								
Albany	13,500	4	22	5	37	0	-------	-------
Augusta	55,200	5	14	98	1 78	1	02	1 0
Brunswick	16,800	6	47	1	06	0	-------	-------
Macon	58,200	5	106	21	36	0	-------	-------
Savannah	93,100	-------	-------	9	10	0	-------	-------
Idaho.								
Boise	23,000	6	48	6	26	0	-------	-------
Pocatello	18,300	7	31	2	11	0	-------	-------
Illinois.								
Alton	26 800	6	75	39	1 46	0	-------	-------
Aurora	40,300	6	291	349	8 66	0	-------	-------
Berwyn	18,900	2	23	273	14 44	0	-------	-------
Bloomington	30,400	5	388	793	26 09	2	07	3
Blue Island	13,200	5	60	7	53	0	-------	-------
Centralia	14,100	5	6	300	21 28	0	-------	-------
Champaign	18,200	7	105	339	18 63	0	-------	-------
Chicago Heights	22,100	4	14	18	81	2	09	11.1
Cicero	62,200	7	141	258	4 15	0	-------	-------
Danville	37 000	6	49	84	2 27	0	-------	-------
Decatur	53,900	4	211	678	12 58	0	-------	-------
East Moline	-------	-------	-------	3	-------	0	-------	-------
East St Louis	71,400	6	96	10	14	0	-------	-------
Elgin	33,400	7	68	333	9 97	0	-------	-------
Evanston	43,900	7	134	476	10 84	0	-------	-------
Freeport	20 700	5	61	128	6 18	0	-------	-------
Galesburg	24,800	5	231	4	16	0	-------	-------
Jacksonville	15 900	7	55	4	25	0	-------	-------
Joliet	40,600	4	180	25	62	0	-------	-------
Kewanee	19,700	-------	-------	62	3 15	0	-------	-------
La Salle	13,900	6	115	5	36	0	-------	-------
Maywood	14,200	7	123	322	22 68	0	-------	-------
Moline	33,900	7	283	38	1 12	0	-------	-------
Murphysboro	12,500	3	13	2	16	0	-------	-------
Oak Park	51 400	7	314	1,173	22 82	1	.02	.1
Ottawa	11,500	5	45	5	43	0	-------	-------
Pekin	13,300	7	11	11	83	0	-------	-------
Peoria	81,600	7	40	207	2 54	0	-------	-------
Quincy	-------	7	194	216	-------	0	-------	-------
Rock Island	40,000	7	350	89	2 22	0	-------	-------
Rockford	76,500	7	452	702	9 18	5	07	.7
Springfield	63,900	6	60	378	5 92	1	02	3
Streator	15,100	2	9	50	3 31	0	-------	-------
Waukegan	22,000	4	85	128	5.82	0	-------	-------

Reported Prevalence for the Year 1925—Continued

MEASLES—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Indiana								
Anderson	33,900	7	48	18	0 53	0	------	------
Bloomington	12,600	4	74	7	56	0	------	------
Connersville	12,500	1	158	2	16	0	------	------
Crawfordsville	10,500	6	13	2	19	0	------	------
East Chicago	45,600	7	60	93	2.04	0	------	------
Elwood	------	6	33	2	------	0	------	------
Fort Wayne	97,800	5	234	145	1 48	0	------	------
Frankfort	13,100	7	17	14	1 07	0	------	------
Gary	76,900	5	37	252	3.28	1	0 01	0 4
Hammond	50,400	6	150	58	1 15	0	------	------
Huntington	15,900	5	35	4	25	0	------	------
Kokomo	36 900	7	22	13	35	0	------	------
La Fayette	32,800	7	19	10	42	0	------	------
Logansport	23,100	7	35	10	43	0	------	------
Michigan City	20,300	4	9	15	74	1	05	6 7
Mishawaka	16,700	7	23	26	1 56	0	------	------
Muncie	42,500	7	110	22	52	0	------	------
New Albany	------	5	6	1	------	0	------	------
Newcastle	17,000	7	49	25	1 47	0	------	------
Peru	12,700	2	229	13	1 02	0	------	------
Richmond	30,500	7	41	18	59	0	------	------
South Bend	80,100	6	327	99	1 24	0	------	------
Terre Haute	71,100	5	55	300	4 22	2	03	7
Whiting	12,200	4	23	36	2 95	0	------	------
Iowa								
Boone	12,800	4	23	2	16	0	------	------
Burlington	26,400	5	58	10	38	0	------	------
Cedar Rapids	50,600	1	131	14	28	1	02	7 1
Clinton	26,400	4	113	4	15	0	------	------
Council Bluffs	39,800	7	65	3	08	0	------	------
Dubuque	41,000	6	87	5	.12	0	------	------
Fort Dodge	21,700	3	58	2	09	0	------	------
Iowa City	15,300	3	80	51	3 33	------	------	------
Marshalltown	16,900	5	9	80	4.73	------	------	------
Mason City	22,700	7	48	8	35	0	------	------
Muscatine	16,800	6	104	4	24	0	------	------
Ottumwa	26,400	------	------	2	08	0	------	------
Waterloo	36,800	4	59	25	68	0	------	------
Kansas								
Arkansas City	14,000	------	------	1	.07	0	------	------
Coffeyville	16,200	6	85	6	37	0	------	------
Hutchinson	26,000	4	86	7	27	------	------	------
Lawrence	12,300	7	27	1	08	0	------	------
Leavenworth	20,900	7	47	3	.14	------	------	------
Parsons	14,800	4	80	5	.34	0	------	------
Pittsburg	19,200	5	56	2	.10	0	------	------
Topeka	55,400	4	261	26	47	1	.02	3 8
Wichita	88,400	5	267	27	31	0	------	------
Kentucky								
Covington	58,300	5	120	6	10	0	------	------
Newport	------	4	56	40	------	------	------	------
Paducah	25,900	7	326	10	39	0	------	------
Louisiana								
Baton Rouge	27,800	5	15	2	07	0	------	------
Lake Charles	------	2	575	9	------	0	------	------
Shreveport	57,900	3	143	10	17	0	------	------
Maine								
Auburn	18,100	6	77	8	.44	0	------	------
Bangor	26,600	3	23	4	15	0	------	------
Bath	17,800	5	5	3	17	0	------	------
Biddeford	18,500	5	33	6	32	0	------	------
Lewiston	34,900	6	173	18	.52	0	------	------
Portland	75,300	7	342	25	33	0	------	------
South Portland	------	1	4	6	------	------	------	------
Waterville	14,400	6	43	4	28	0	------	------
Westbrook	------	------	------	2	------	0	------	------
Massachusetts								
Adams	13,500	7	8	34	2.52	0	------	------
Amesbury	11,200	4	51	192	17.14	2	18	1 0
Arlington	24,900	7	157	134	5 38	0	------	------
Athol	------	1	103	7	------	0	------	------

Reported Prevalence for the Year 1925—Continued

MEASLES—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Massachusetts—Continued								
Attleboro	20,600	7	60	12	0.58	0		
Belmont	15,300	5	36	309	20.20	0		
Beverly	22,700	7	37	61	2.69	0		
Braintree	13,200	5	48	41	3.11	0		
Brockton	65,300	7	321	76	1.16	0		
Brookline	42,700	7	337	541	12.67	1	0.02	0.2
Chelsea	47,200	7	244	351	7.44	2	.04	.6
Chicopee	41,900	6	52	4	.10	0		
Clinton	14,200	6	95	46	3.24	0		
Danvers	11,800	7	32	30	2.54	0		
Dedham	13,900	5	29	95	6.83	1	.07	1.1
Easthampton	11,600	6	42	20	1.72	0		
Everett	42,100	7	231	404	9.60	5	.12	1.2
Framingham	21,100	7	61	524	24.83	3	.14	.6
Gardner	18,700	7	36	394	21.07	7	.37	1.8
Gloucester	23,400			11	.47	0		
Greenfield	15,200	7	37	17	1.12	0		
Haverhill	49,200	7	66	578	1.75	4	.08	.7
Holyoke	60,300	7	234	97	1.61	0		
Lawrence	93,500	6	388	612	6.55	8	.09	1.3
Leominster	22,100	7	101	168	7.60	0		
Malden	51,800	7	243	459	8.86	1	.02	.2
Marlboro	16,200	6	89	20	1.23	0		
Medford	47,600	7	297	482	10.13	1	.02	.2
Melrose	20,200	7	111	375	18.56	0		
Methuen	20,600	6	87	327	15.87	0		
Milford	14,800	7	36	26	1.76	2	.14	7.7
Milton		1	195	88				
Newburyport	15,700	7	80	291	18.54			
Newton	53,000	5	202	132	2.49	0		
North Adams	22,700	7	14	36	1.59	0		
Northampton	24,100	7	130	53	2.20	0		
Northbridge	10,100	7	31	37	3.66	0		
Palmer		2	50	10		0		
Peabody	19,900	7	78	48	2.41	1	.05	2.1
Pittsfield	46,900	7	101	24	.51	2	.04	8.3
Plymouth	13,200	5	27	37	2.80	0		
Quincy	60,100	7	555	819	13.63	6	.10	.7
Revere	33,300	1	173	185	5.56	1	.03	.5
Salem	42,800	7	131	432	10.09	0		
Saugus	12,700	6	48	77	6.06	0		
Somerville	99,000	7	489	680	6.87	3	.03	.4
Southbridge	15,500	7	17	5	.32	0		
Taunton	39,300	5	87	11	.28	0		
Wakefield	15,600	5	132	39	2.50	0		
Waltham	34,700	7	85	342	9.86	0		
Watertown	25,500	7	155	352	13.80	0		
West Springfield	15,300	5	60	73	4.77			
Westfield	19,300	7	24	74	3.83	0		
Winchester	11,600	6	65	357	30.78	3	.26	.8
Winthrop	16,200	7	42	124	7.65	0		
Woburn	18,400	7	82	83	4.51	0		
Michigan								
Adrian	12,500	3	77	110	8.80	0		
Ann Arbor	22,200	7	129	61	2.75	1	.05	1.6
Battle Creek	42,300	7	442	216	5.11	0		
Bay City	48,900	7	81	10	.20	0		
Benton Harbor	14,000	7	35	75	5.36	0		
Cadillac				35		1		2.9
Hamtramck	81,700	5	66	21	.26	0		
Highland Park	72,300	7	431	76	1.05	0		
Holland	13,100	6	8	21	1.60	0		
Ironwood	17,400	7	96	13	.75	0		
Ishpeming		5	54	28		0		
Jackson	58,000	7	256	459	7.91	0		
Kalamazoo	53,600	7	336	628	11.72	0		
Lansing	70,800	5	485	1,082	15.28	0		
Marquette	13,400	6	78	22	1.64	0		
Muskegon	43,100	6	54	56	1.30	0		
Muskegon Heights		2	96	241		2		.8
Pontiac	47,500	7	426	294	6.19	1	.02	.3

Reported Prevalence for the Year 1925—Continued

MEASLES—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Michigan—Continued								
Port Huron	30,000	6	413	35	1.17	0		
Saginaw	72,100	5	330	25	.35	1	0.01	4.0
Sault Ste Marie		7	39	4		0		
Minnesota								
Albert Lea		1	180	14		0		
Austin	11,900			2	.17	0		
Faribault	12,300	5	18	1	.08	0		
Rochester	17,000	3	88	12	.71	0		
Winona	19,500	6	68	3	.15			
Mississippi								
Biloxi	12,600	3	39	1	.08	0		
Jackson	23,700			4	.17	0		
Laurel	15,700			9	.57			
Meridian	24,300	1	410	6	.25			
Natchez	13,100			50	3.82	0		
Missouri								
Independence	12,700	2	164	20	1.57	0		
Joplin		6	58	2		0		
Moberly	13,900	4	35	42	3.02	0		
St Joseph	78,300	7	184	13	.17	0		
Springfield	42,100	5	183	6	.14	0		
Montana								
Anaconda	12,500	6	39	1	.08	0		
Butte	42,900	7	64	63	1.47	0		
Great Falls	29,900	7	134	1,137	38.03	0		
Missoula		7	8	206		0		
Nebraska								
Lincoln	60,900	4	134	33	.54	0		
North Platte	13,700	3	146	4	.29	0		
New Hampshire								
Berlin	18,600	5	15	1	.05	0		
Claremont		2	59	3		0		
Concord	22,500	7	112	24	1.07	0		
Dover		6	114	4		0		
Keene	11,900	6	29	9	.76	0		
Manchester	83,100	7	182			1	.01	
Nashua	29,700	6	50	200	6.73	0		
Portsmouth	14,900	7	34	37	2.48			
New Jersey								
Asbury Park	13,700	7	50	9	.66	0		
Bayonne	88,800	4	196	6	.07	1	.01	16.7
Belleville	18,900	7	104	40	2.12	0		
Bloomfield	26,000	6	231	48	1.85	0		
Bridgeton	14,400	6	53	27	1.87	0		
Carteret	14,000	1	39	1	.07	0		
Clifton	34,700	5	149	278	8.01	0		
Collingswood		1	14	63				
Dover		2	23	10		0		
East Orange	60,000	7	651	86	1.43	0		
Englewood	12,600	7	108	12	.95	0		
Garfield	24,600	4	60	373	15.16	0		
Gloucester City	13,700	3	36	76	5.55	0		
Hackensack	19,700	7	125	5	.25	0		
Harrison	16,400	6	106	21	1.28			
Hoboken		5	152	70		0		
Irvington	33,200	5	205	125	3.77	0		
Kearny	31,300	7	364	151	4.82	0		
Lodi		1	6	27		0		
Long Branch	13,600	7	144	12	.88	0		
Montclair	32,900	6	237	256	7.78	0		
Morristown	12,600	7	49	5	.40	0		
New Brunswick	38,000	7	41	31	.82	0		
Nutley				43		0		
Orange	35,400	5	114	64	1.81	0		
Passaic	69,000	6	271	489	7.09	3	.04	.6
Perth Amboy	47,100	7	123	12	.25	0		
Plainfield	31,700	7	279	11	.35	0		
Rahway	12,000	7	28	3	.25	0		
Red Bank		1	106	21		0		
Ridgefield Park		2	97	7		0		
Rutherford		2	108	280		1		.4

Reported Prevalence for the Year 1925—Continued

MEASLES—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
New Jersey—Continued.								
Summit	11,700	5	83	28	2 39	0	-------	-------
Union City	63,100	-------	-------	73	1 16	-------	-------	-------
West New York	39,200	6	153	60	1 53	0	-------	-------
West Orange	18,200	7	221	311	17 09	0	-------	-------
New Mexico								
Albuquerque	21,000	2	238	15	71	0	-------	-------
New York								
Amsterdam	35,300	4	234	12	34	0	-------	-------
Binghamton	71,900	7	747	21	29	0	-------	-------
Cohoes	23,000	7	20	108	4 70	0	-------	-------
Corning	15,700	5	45	49	3 12	0	-------	-------
Cortland	13,900	7	56	4	29	0	-------	-------
Dunkirk	19,900	7	19	21	1 06	0	-------	-------
Elmira	48,400	5	486	49	1 01	0	-------	-------
Freeport	-------	1	178	17	-------	0	-------	-------
Geneva	15,900	5	121	6	.38	0	-------	-------
Glens Falls	17,900	7	17	15	84	0	-------	-------
Gloversville	22,100	7	119	111	5 02	0	-------	-------
Hornell	15,800	6	191	16	1 01	0	-------	-------
Hudson	11,800	5	62	5	42	0	-------	-------
Ilion	10,400	2	87	2	19	0	-------	-------
Ithaca	18,900	6	43	6	32	0	-------	-------
Jamestown	43,400	5	285	94	2 17	0	-------	-------
Johnson City	-------	1	234	9	-------	0	-------	-------
Johnstown	10,700	-------	-------	22	2 06	0	-------	-------
Kingston	28,100	4	89	6	21	0	-------	-------
Lackawanna	20,200	7	205	274	13 56	0	-------	-------
Little Falls	12,400	4	30	2	16	0	-------	-------
Lockport	21,700	5	46	204	9 40	0	-------	-------
Middletown	20,400	7	72	6	29	0	-------	-------
Mount Vernon	50,400	6	246	131	2 60	3	0 06	2 3
New Rochelle	44,200	5	260	409	9 25	0	-------	-------
Newburgh	30,400	5	66	141	4 64	0	-------	-------
Niagara Falls	57,000	6	349	480	8 42	3	05	.6
North Tonawanda	17,400	7	56	291	16 72	0	-------	-------
Olean	21,300	7	98	275	12 91	0	-------	-------
Peekskill	18,000	7	140	63	3 50	0	-------	-------
Poughkeepsie	35,700	7	37	12	34	0	-------	-------
Rensselaer	11,400	3	24	124	10 88	0	-------	-------
Rome	30,300	7	261	12	40	0	-------	-------
Salamanca	-------	1	171	4	-------	0	-------	-------
Saratoga Springs	13,900	7	36	5	36	0	-------	-------
Schenectady	92,800	7	402	36	.39	0	-------	-------
Troy	72,200	6	323	85	1 18	1	.01	1.2
Watertown	32,800	7	218	62	1 89	-------	-------	-------
Watervliet	16,200	5	61	6	37	0	-------	-------
White Plains	27,400	7	148	46	1 68	0	-------	-------
North Carolina.								
Asheville	31,500	7	44	55	1 75	0	-------	-------
Charlotte	53,300	5	328	17	32	0	-------	-------
Greensboro	47,100	3	593	9	.19	0	-------	-------
High Point	23,600	1	736	1	04	0	-------	-------
New Bern	12,200	-------	-------	5	.41	0	-------	-------
Raleigh	30,400	7	272	16	.53	0	-------	-------
Rocky Mount	15,100	5	39	2	13	0	-------	-------
Salisbury	17,700	3	82	25	1 41	0	-------	-------
Wilmington	37,100	7	77	4	11	0	-------	-------
Wilson	12,800	-------	-------	2	16	0	-------	-------
Winston-Salem	69,000	6	446	153	2 22	0	-------	-------
North Dakota								
Fargo	24,900	5	68	8	32	0	-------	-------
Ohio:								
Alliance	25,000	4	77	14	56	0	-------	-------
Ashtabula	25,100	6	18	380	15 14	1	04	.3
Barberton	23,300	6	14	61	2.62	0	-------	-------
Bellaire	16,300	3	111	4	.25	1	.06	25.0
Bellefontaine	-------	-------	-------	3	-------	0	-------	-------
Bucyrus	11,700	-------	-------	85	7 26	0	-------	-------
Cambridge	14,000	5	11	42	3.00	0	-------	-------
Chillicothe	16,600	7	21	3	.18	0	-------	-------
Cleveland Heights	22,200	3	206	33	1.49	0	-------	-------

Reported Prevalence for the Year 1925—Continued

MEASLES—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Ohio—Continued								
Conneaut				13		0		
Cuyahoga Falls	13,700	3*	19	32	2.34	0		
East Cleveland	37,600	5	64	59	1.57	0		
East Liverpool	22,000	2	3	38	1.73	1	0.04	2.6
East Youngstown (Campbell)	16,000	5	54	99	6.19	1	.06	1.0
Elyria	23,800	7	35	66	2.77	0		
Findlay	18,200	7	171	298	16.37	0		
Fostoria		3	15	10		0		
Fremont	13,900	7	16	42	3.02	1	.07	2.4
Ironton	14,500			246	16.97	0		
Kenmore	19,400	4	95	87	4.48	0		
Lakewood	56,800	4	68	73	1.29	0		
Lancaster	16,100	4	20	6	.37	0		
Lima	16,700	7	255	45	.96	0		
Lorain	42,300	7	146	348	8.23	0		
Mansfield	31,800	7	100	28	.88	0		
Marietta	15,300			31	2.03	0		
Marion	32,500	4	5	17	.52	0		
Martins Ferry	15,500			6	.39	0		
Middletown	30,800	7	55	25	.81	0		
Newark	30,500	7	26	16	.52	0		
Niles	16,600	4	54	151	9.10	4	.24	2.6
Norwood	29,900	7	158	8	.27	0		
Piqua	16,000	7	8	2	.12	0		
Salem	11,100	5	15	2	.18	0		
Sandusky	24,500	7	37	237	9.67	0		
Springfield	68,700	6	323	18	.26	0		
Steubenville	32,000	7	35	3	.09	0		
Zanesville	30,400	7	113	6	.20	0		
Oklahoma								
Ardmore	17,200			7	.41	1	.06	14.3
Okmulgee	25,300	1	40	11	.43	0		
Oregon								
Eugene	11,400	7	49	5	.44	0		
Pennsylvania								
Allentown	92,200	3	536	780	8.46	1	.01	.1
Altoona	66,100	5	150	92	1.39	0		
Beaver Falls	13,100	4	50	136	10.38			
Braddock	21,700	7	172	75	3.46	1	.05	1.3
Bradford	15,800	6	199	11	.70	0		
Butler	25,200	7	210	99	3.93	0		
Canonsburg	13,500	4	8			1	.07	
Carlisle	11,400	7	61	20	1.75			
Carnegie	12,400	3	14	225	18.15	0		
Carrick	13,000	5	46	136	10.46			
Chambersburg	13,900	7	35	42	3.02	0		
Charleroi	12,600	7	43	69	5.48			
Clairton	14,900			136	9.13	2	.13	1.5
Coatesville	16,500	7	52	29	1.76	0		
Columbia				52		0		
Connellsville	14,300	6	41	26	1.82	0		
Duquesne	20,900	4	63	212	10.14	0		
Easton	36,800	6	302	396	10.76	0		
Farrell	18,700	5	35	4	.21	0		
Greensburg	16,100	1	65	10	.62	0		
Harrisburg	83,400	5	268	575	6.89	8	.10	1.4
Hazleton	36,100	7	278	295	8.17	5	.14	1.7
Homestead	21,400	7	30	14	.65	0		
Jeannette	11,800	5	32	28	2.39	0		
Kingston	18,000	2	87	274	15.22	0		
Lancaster	56,500	5	199	606	10.73	3	.05	.5
Lansford		4	14	6		0		
Latrobe				4		0		
Lewistown				30		0		
McKees Rocks	18,100	3	45	161	8.90	0		
McKeesport	49,100	7	206	105	2.14	0		
Meadville	15,600	3	75	31	1.99	0		
Monessen	21,200	5	126	105	4.95	1	.05	1.0
Mount Carmel		3	76	2		0		
Nanticoke	24,700	6	59	21	.85	1	.04	4.8
New Castle	49,800	5	114	8	.16	0		

Reported Prevalence for the Year 1925—Continued

MEASLES—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Pennsylvania—Continued								
Norristown	34 800	7	88	400	11 49	1	0 03	0 2
North Braddock	16 700	7	102	65	3 89	0		
Oil City	23, 300	7	66	37	1 59			
Olyphant	11, 200	6	4	1	09	0		
Phoenixville		3	58	263				
Pittston	19, 800	7	29	78	3 94			
Plymouth		6	39	118		0		
Pottstown	18, 500			29	1 57	0		
Sharon	25, 000	4	85	47	1 88	0		
Steelton		7	35	30		0		
Sunbury	16, 800	7	48	142	8 45	0		
Swissvale	12, 900	5	98	49	3 80	0		
Uniontown		3	29	95		0		
Vandergrift		1	6	193		1		5
Warren	15 100	7	18	77	5 10	0		
Washington	23, 000	7	230	23	1 00			
Waynesboro				12				
Wilkes-Barre	77, 600	2	356	634	8 17	1	01	.2
Wilkinsburg	27, 400	3	63	208	7 59	0		
Windber		1	3	21		0		
Woodlawn	18, 900	1	115	26	1 38	0		
York	49, 100	6	188	27	55	0		
Rhode Island								
Central Falls	25, 400	2	35	13	51			
Cranston	34, 500	6	43	68	1 97	0		
Newport	27, 800	7	12	19	68	0		
Pawtucket	69, 800	6	90	30	43	0		
Woonsocket	49, 700					8	16	
South Carolina								
Charleston	73, 100	1	128	5	07	0		
Florence	13, 200			5	38	0		
Greenville	27, 300	4	34	2	07	0		
Spartanburg	25, 500	4	36	2	08	0		
Sumter		2	60	2		0		
South Dakota								
Aberdeen	15, 000			5	33			
Sioux Falls	30, 100	7	85	6	20	0		
Tennessee								
Chattanooga	66, 600	2	37	9	14			
Knoxville	95, 500	4	200	67	70	0		
Texas								
Corpus Christi	11, 800			150	12 71	0		
Galveston	48, 400			1	02	0		
Orange		1	120	24		0		
Texarkana	12, 400	2	40	9	73	0		
Tyler	13, 000	1	25	1	08	0		
Waco	43, 900	6	12	5	11	0		
Utah:								
Ogden	36, 900	7	108	14	38	0		
Vermont.								
Barre		5	12	9		0		
Bennington		2	235	5		0		
Burlington	24, 100	6	54	15	62	1	.04	6 7
Rutland	15, 800	3	44	10	63	0		
Virginia:								
Alexandria	18, 500	6	14	9	49	0		
Charlottesville	11, 200	3	28	58	5 18	3	27	5 2
Danville	23, 000	7	48	5	22	0		
Lynchburg	30, 400	6	133	13	.43	0		
Newport News	47, 100	5	175	22	.47	1	.02	4 5
Petersburg	35, 700	7	84	583	16 33	3	.08	.5
Portsmouth	59, 000	7	189	20	34	0		
Roanoke	58, 200	4	292	217	3 73	1	.02	.5
Suffolk				9		0		
Washington.								
Aberdeen	16, 200	6	6	6	.37	0		
Bremerton		2	93	86		0		
Everett	29, 300	7	182	6	20	0		
Vancouver	14 500	6	146	5	34	0		
Walla Walla				29		0		
Yakima	22, 700	7	231	9	40	0		

Reported Prevalence for the Year 1925—Continued

MEASLES—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
West Virginia								
Bluefield	19,300	4	31	9	0.47	0	-------	-------
Charleston	49,000	7	129	536	10.94	2	0.04	0.4
Clarksburg	30,400	3	58	52	1.71	0	-------	-------
Fairmont	21,000	7	54	177	8.43	-------	-------	-------
Huntington	63,500	2	246	16	.25	-------	-------	-------
Martinsburg	13,500	5	18	217	16.07	7	.52	3.2
Morgantown	13,800	2	20	3	.22	0	-------	-------
Parkersburg	21,300	5	45	4	.19	0	-------	-------
Wheeling	-------	7	217	175	-------	1	-------	.6
Wisconsin								
Appleton	21,100	5	28	18	.85	0	-------	-------
Ashland	-------	5	26	3	-------	-------	-------	-------
Beloit	24,800	7	24	14	.56	0	-------	-------
Eau Claire	22,400	6	197	389	17.37	0	-------	-------
Fond du Lac	26,000	5	46	26	1.00	1	.04	3.8
Green Bay	34,300	5	115	11	.32	0	-------	-------
Janesville	20,800	6	68	68	3.27	0	-------	-------
Kenosha	50,900	7	160	186	3.65	0	-------	-------
La Crosse	30,400	7	162	799	26.28	0	-------	-------
Madison	46,400	6	189	146	3.15	-------	-------	-------
Manitowoc	22,100	5	26	7	.32	0	-------	-------
Marinette	-------	7	83	13	-------	0	-------	-------
Oshkosh	33,200	7	141	22	.66	0	-------	-------
Racine	67,700	6	73	876	12.94	1	.01	.1
Sheboygan	33,500	6	9	59	1.76	1	.03	1.7
Superior	-------	4	64	12	-------	0	-------	-------
Waukesha	14,700	1	380	462	31.43	1	.07	.2
Wausau	20,100	7	51	59	2.94	0	-------	-------
West Allis	18,400	4	22	77	4.18	1	.05	1.3

MUMPS

City	Estimated population July 1, 1925	Average, 1922–1924		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama								
Anniston	20,500	3	4	46	2.24	0	-------	-------
Dothan	14,500	2	1	1	.07	0	-------	-------
Florence	12,700	1	6	20	1.57	0	-------	-------
Mobile	66,000	1	13	15	.23	0	-------	-------
Montgomery	46,500	2	10	303	6.52	0	-------	-------
Tuscaloosa	13,100	-------	-------	19	1.45	0	-------	-------
Arizona								
Phoenix	38,700	2	11	3	.08	0	-------	-------
Tucson	26,700	3	9	4	.15	1	.04	4.0
Arkansas								
Hot Springs	-------	-------	-------	7	-------	-------	-------	-------
Little Rock	74,200	3	35	11	.15	0	-------	-------
California								
Alameda	31,900	3	23	151	4.73	0	-------	-------
Alhambra	-------	2	50	50	-------	0	-------	-------
Bakersfield	23,500	-------	-------	39	1.66	0	-------	-------
Berkeley	66,200	3	62	1,207	18.23	0	-------	-------
Chico	-------	2	3	17	-------	0	-------	-------
Eureka	13,500	3	63	2	.15	0	-------	-------
Fresno	58,500	-------	-------	33	.56	0	-------	-------
Glendale	21,300	3	19	258	12.11	0	-------	-------

Reported Prevalence for the Year 1925—Continued

MUMPS—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
California—Continued								
Long Beach	91,200	3	81	871	9.55	0		
Pasadena	56,700	3	64	280	4.94	0		
Pomona	15,400	3	106	62	4.03	0		
Richmond	22,500	3	0	8	.36	0		
Riverside		3	14	73		0		
Sacramento	72,300	3	52	32	.44	0		
San Bernardino	22,800	3	47	25	1.10	0		
San Jose	43,600	3	18	39	.89	0		
Santa Ana	19,500	3	6	11	.56	0		
Santa Barbara	24,000	1	3	20	.83	0		
Stockton	47,300	3	42	767	16.22	0		
Vallejo	26,600			1	.04	0		
Colorado								
Boulder	11,800	3	91	18	1.52	0		
Colorado Springs				34		0		
Greeley	12,500	2	19	14	1.12	0		
Pueblo	43,800	3	77	145	3.31	0		
Trinidad	11,000			50	4.55	0		
Connecticut								
Danbury				7		0		
Fairfield	14,500	3	55	2	.14	0		
Greenwich	25,300	3	107	16	.63	0		
Meriden	36,300	3	21	70	1.93			
Milford	13,500	3	13	3	.22	0		
New Britain	68,000	3	34	4	.06	0		
New London	29,100	3	24	79	2.71	0		
Shelton		1	1	4		0		
Stamford	40,700	2	25	17	.42	0		
Florida								
St Petersburg	26,800	2	13	13	.49	0		
Tampa	94,700	2	3	39	.41	0		
West Palm Beach				5		0		
Georgia								
Albany	13,500	3	15	7	.52	0		
Augusta	55,200	2	23	11	.20	0		
Brunswick	16,800			24	1.43	0		
Lagrange	23,500	1	8	17	.72	0		
Macon	58,200	3	218	631	10.84	0		
Rome	13,900	2	22	29	2.09	0		
Savannah	93,100	3	7	178	1.91	0		
Idaho								
Pocatello	18,300	2	35	3	.16	0		
Illinois								
Alton	26,800	3	134	24	.90	0		
Aurora	40,300	2	6	26	.65	0		
Berwyn	18,900	3	98	3	.16	0		
Bloomington	30,400	3	147	51	1.68	0		
Blue Island	13,200	3	51	2	.15	0		
Centralia	14,100			40	2.84	0		
Cicero	62,200	3	281	16	.26	0		
Danville	37,000			45	1.22	0		
Decatur	53,900	2	33	50	.93	0		
East Moline		2	10	149		0		
East St Louis	71,400			2	.03	0		
Elgin	33,400	3	326	264	7.90	0		
Evanston	43,900	3	132	238	5.42	0		
Freeport	20,700			16	.77	0		
Galesburg	24,800			7	.28	0		
Jacksonville	15,900	3	69	753	47.36	0		
Kewanee	19,700			4	.20	0		
La Salle	13,900	3	17	343	24.68	0		
Maywood	14,200	3	69	9	.63	0		
Moline	33,900	3	38	291	8.58	0		
Murphysboro	12,500			5	.40	0		
Oak Park	51,400	3	464	44	.86	0		
Ottawa	11,500	2	1	3	.26	0		
Pekin	13,300	3	24	48	3.61	0		
Peoria	81,800	3	59	180	2.21	0		

Reported Prevalence for the Year 1925—Continued

MUMPS—Continued

City	Estimated population, July 1, 1925	Average, 1922-1924		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Illinois—Continued								
Quincy		3	69	152		0		
Rock Island	40,000	3	24	40	1.00	0		
Rockford	76,500	3	768	81	1.06	0		
Springfield	63,900	2	42	888	13.90	0		
Streator	55,100	3	5	10	.66	0		
Waukegan	22,100			28	1.27	0		
Indiana								
Connersville	12,500	1	3	85	6.80	0		
Crawfordsville	10,500	3	2	1	.10	0		
East Chicago	45,600	3	13	10	.22	0		
Frankfort	13,100	3	5	3	.23	0		
Hammond	50,400	1	10	2	.04	0		
La Fayette	23,800			2	.08	0		
Logansport	23,100			1	.04	0		
Michigan City	20,300	2	5	11	.54	0		
Newcastle	17,000	1	5	4	.24	0		
Iowa								
Boone	12,800	1	23	63	4.92	0		
Burlington	26,400	3	40	86	3.26	0		
Clinton	26,400	3	3	3	.11	0		
Council Bluffs	39,800	3	5	16	.40	0		
Dubuque	41,000	3	20	77	1.88	0		
Iowa City	15,300	2	87	1	.07			
Marshalltown	16,900	2	43	802	47.46			
Mason City	22,700	2	6	2	.09	0		
Muscatine	16,800	3	94	3	.18	0		
Waterloo	36,800	2	163	37	1.01	0		
Kansas								
Coffeyville	16,200	3	75	15	.93	0		
Emporia	12,200	2	73	369	30.25	0		
Hutchinson	26,000	2	127	87	3.35			
Lawrence	12,300	3	30	301	24.47	0		
Leavenworth	20,900			70	3.35			
Parsons	14,800	3	4	34	2.30	0		
Pittsburg	19,200	3	2	2	.10	0		
Topeka	55,400	3	179	2,471	44.60	0		
Wichita	88,400			42	.48	0		
Kentucky								
Covington	58,300	2	8	19	.33	0		
Henderson	12,600	3	5	10	.79	0		
Newport		2	2	51		0		
Paducah	25,900			1	.04	0		
Louisiana								
Shreveport	57,900	2	15	2	.03	0		
Maine								
Auburn	18,100	3	13	99	5.47	0		
Bangor	26,600	3	4	114	4.29	0		
Bath	17,800	3	1	30	1.69	0		
Biddeford	18,500	1	34	25	1.35	0		
Lewiston	34,900	3	10	112	3.21	0		
Portland	75,300	3	334	773	10.27	0		
Sanford	11,600	3	1	33	2.84	0		
South Portland		1	39	11				
Waterville	14,400	3	15	71	4.93	0		
Westbrook				8		0		
Massachusetts								
Amesbury	11,200	2	7	34	3.04	0		
Arlington	24,900	3	19	149	5.98	0		
Attleboro	20,600	3	60	2	.10	0		
Belmont	15,300	3	38	11	.72	0		
Braintree	13,200	3	69	2	.15	0		
Brockton	65,300	3	48	70	1.07	0		
Brookline	42,700	3	126	14	.33	0		
Chelsea	47,200	3	41	3	.06	0		
Chicopee	41,900			1	.02	0		
Danvers	11,800	3	6	2	.17	0		
Dedham	13,900	2	7	17	1.22	0		

Reported Prevalence for the Year 1925—Continued

MUMPS—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
Massachusetts—Continued								
Easthampton	11,600	3	15	6	0 52	0	-	-
Everett	42,100	3	88	2	05	0	-	-
Framingham	21,100	3	163	34	1 61	0	-	-
Gloucester	23,400	-	-	14	60	0	-	-
Greenfield	15,200	3	68	228	15 00	0	-	-
Haverhill	49,200	3	88	115	2 34	0	-	-
Holyoke	60,300	3	22	32	53	0	-	-
Lawrence	93,500	3	65	36	39	0	-	-
Leominster	22,100	3	13	7	32	0	-	-
Malden	51,890	3	69	5	10	0	-	-
Marlboro	16,200	-	-	4	25	0	-	-
Medford	47,600	3	81	37	78	0	-	-
Melrose	20,200	3	45	8	40	0	-	-
Methuen	20,600	3	44	80	3 88	0	-	-
Milford	14,800	2	38	5	34	0	-	-
Milton	-	1	9	12	-	-	-	-
Newburyport	15,700	3	21	157	10 00	0	-	-
Newton	53,000	3	409	87	1 64	0	-	-
Northampton	24,100	3	145	14	58	0	-	-
Northbridge	10,100	3	16	2	20	0	-	-
Peabody	19,900	3	20	2	10	0	-	-
Pittsfield	46,900	3	36	2	04	0	-	-
Plymouth	13,200	3	58	3	23	0	-	-
Quincy	60,100	3	103	26	43	0	-	-
Saugus	12,700	3	34	1	08	0	-	-
Somerville	99,000	3	89	18	18	0	-	-
Southbridge	15,500	2	22	1	06	0	-	-
Wakefield	15,600	3	19	2	.13	0	-	-
Waltham	34,700	3	153	3	.09	0	-	-
Watertown	25,500	3	54	23	.90	0	-	-
West Springfield	15,300	2	41	8	52	-	-	-
Winchester	11,600	3	29	25	2 16	0	-	-
Winthrop	16,200	3	103	2	12	0	-	-
Michigan:								
Adrian	12,500	1	8	5	40	0	-	-
Ann Arbor	22,200	3	126	8	36	0	-	-
Battle Creek	42,300	3	120	596	14 09	0	-	-
Bay City	48,900	3	3	5	.10	0	-	-
Benton Harbor	14,000	3	3	1	07	0	-	-
Hamtramck	81,700	3	11	10	12	0	-	-
Highland Park	72,300	3	221	67	.93	0	-	-
Holland	13,100	2	8	2	15	0	-	-
Ironwood	17,400	3	6	8	46	0	-	-
Jackson	58,000	3	303	259	4.47	0	-	-
Kalamazoo	53,600	3	226	131	2 44	0	-	-
Lansing	70,800	3	86	174	2 46	-	-	-
Marquette	13,400	-	-	135	10 07	0	-	-
Muskegon	43,100	3	16	2	05	0	-	-
Muskegon Heights	-	2	17	1	-	0	-	-
Pontiac	47,500	2	32	15	32	0	-	-
Port Huron	30,000	2	8	30	1.00	0	-	-
Saginaw	72,100	3	92	11	.15	0	-	-
Minnesota:								
Austin	11,900	1	4	6	50	0	-	-
Brainerd	-	-	-	39	-	-	-	-
Hibbing	18,000	3	1	1	06	0	-	-
Mississippi:								
Biloxi	12,600	3	12	3	.24	0	-	-
Jackson	23,700	-	-	176	7 43	0	-	-
Laurel	15,700	-	-	348	22 15	-	-	-
Meridian	24,300	1	48	120	4 94	-	-	-
Natchez	13,100	-	-	28	2 14	0	-	-
Missouri:								
Joplin	-	2	4	9	-	0	-	-
St Joseph	78,300	3	53	29	37	0	-	-
Springfield	42,100	2	29	4	.10	0	-	-

Reported Prevalence for the Year 1925—Continued

MUMPS—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Montana								
Great Falls	29,900	3	5	1,299	43 44	0	-------	-------
Helena	-------	-------	-------	23	-------	0	-------	-------
Missoula	-------	2	1	1	-------	0	-------	-------
Nebraska								
Grand Island	15 600	3	13	102	6 54	-------	-------	-------
Lincoln	60,900	3	2[illegible]6	68	1 12	0	-------	-------
North Platte	13,700	2	1	4	29	0	-------	-------
Nevada								
Reno	12,700	3	1	2	16	0	-------	-------
New Hampshire								
Concord	22,500	-------	-------	2	09	0	-------	-------
Dover	-------	3	10	28	-------	0	-------	-------
Keene	11,900	3	1	2	17	0	-------	-------
Manchester	83,[illegible]00	3	9	7	08	0	-------	-------
Portsmouth	14,900	3	28	6	40	-------	-------	-------
New Jersey								
Bayonne	88,800	-------	-------	17	19	0	-------	-------
Belleville	18,900	2	37	58	3 07	0	-------	-------
Bridgeton	14,400	3	27	17	1 18	0	-------	-------
Clifton	34,700	3	12	5	14	0	-------	-------
Collingswood	-------	-------	-------	63	-------	0	-------	-------
East Orange	60,000	2	357	14	23	0	-------	-------
Englewood	12,600	3	75	7	56	0	-------	-------
Garfield	24,600	2	8	8	33	0	-------	-------
Gloucester City	13,700	-------	-------	26	1 90	0	-------	-------
Hackensack	19,700	3	60	14	71	0	-------	-------
Hoboken	-------	3	13	2	-------	0	-------	-------
Irvington	33,200	2	139	7	21	0	-------	-------
Kearny	31,300	3	172	7	22	0	-------	-------
Lodi	-------	-------	-------	1	-------	-------	-------	-------
Long Branch	13,600	3	4	30	2 21	0	-------	-------
Montclair	32,900	3	143	27	82	0	-------	-------
Morristown	12,600	3	38	9	71	0	-------	-------
Nutley	-------	-------	-------	32	-------	0	-------	-------
Orange	35,400	3	129	12	34	0	-------	-------
Passaic	69,000	3	68	28	41	0	-------	-------
Ridgefield Park	-------	2	44	7	-------	0	-------	-------
Rutherford	-------	-------	-------	1	-------	0	-------	-------
Summit	11,700	3	18	63	5 38	0	-------	-------
West Orange	18,200	3	71	4	22	0	-------	-------
New Mexico								
Albuquerque	21,000	-------	-------	75	3 57	0	-------	-------
New York								
Amsterdam	35,300	3	78	3	08	0	-------	-------
Binghamton	71,900	3	434	14	19	0	-------	-------
Cohoes	23,000	1	11	2	09	0	-------	-------
Corning	15,700	2	24	8	51	0	-------	-------
Dunkirk	19,900	3	8	9	45	0	-------	-------
Elmira	48,400	2	121	66	1 36	0	-------	-------
Freeport	-------	1	26	9	-------	0	-------	-------
Geneva	15,900	2	54	35	2 20	0	-------	-------
Glens Falls	17,900	3	11	5	28	0	-------	-------
Gloversville	22,100	3	25	2	09	0	-------	-------
Hornell	15,800	3	93	5	32	0	-------	-------
Ithaca	18,900	3	68	269	14 23	0	-------	-------
Jamestown	43,400	3	22	18	41	0	-------	-------
Johnson City	-------	1	7	6	-------	0	-------	-------
Johnstown	10,700	1	3	16	1 50	0	-------	-------
Kingston	28,100	2	33	147	5 23	0	-------	-------
Lackawanna	20,200	3	11	73	3 61	0	-------	-------
Little Falls	12,400	3	32	2	16	0	-------	-------
Lockport	21,700	3	25	63	2 90	0	-------	-------
Middletown	20,400	-------	-------	2	.10	0	-------	-------
Mount Vernon	50,400	3	243	58	1 15	1	0 02	58.0
New Rochelle	44,200	3	77	151	3 42	0	-------	-------
Newburgh	30,400	3	29	14	46	0	-------	-------
Niagara Falls	57,000	3	102	54	95	0	-------	-------
North Tonawanda	17,400	3	22	4	.23	0	-------	-------

Reported Prevalence for the Year 1925—Continued

MUMPS—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
New York—Continued								
Olean	21,300	3	42	264	12.39	0		
Peekskill	18,000	3	65	5	.28	0		
Poughkeepsie	35,700	3	100	3	.08	0		
Rensselaer	11,400	3	17	1	.09	0		
Rome	30,300	3	19	20	.66	0		
Salamanca				25		0		
Saratoga Springs	13,900	3	92	12	.86	0		
Schenectady	92,800	3	109	12	.13	0		
Troy	72,200	3	127	2	.03	0		
Watertown	32,800			268	8.17	0		
Watervliet	16,200	3	11	3	.19	0		
White Plains	27,400	3	56	4	.15	0		
North Carolina:								
Charlotte	53,300			243	4.56	0		
Greensboro	47,100	1	188	187	3.97	0		
Rocky Mount	15,100	2	7	1	.07	0		
Wilmington	37,100	3	102	113	3.05	0		
Winston-Salem	69,000	3	160	102	1.48	0		
North Dakota:								
Fargo	24,900	2	17	547	21.97	0		
Ohio:								
Ashtabula	25,100	3	15	103	4.10	0		
Bellaire	16,300	1	7	4	.25	0		
Bellefontaine				8		0		
Bucyrus	11,700	3	14	16	1.37	0		
Cambridge	14,000	2	5	2	.14	0		
Chillicothe	16,600			7	.42	0		
Cleveland Heights	22,200	3	132	6	.27	0		
Conneaut		2	6	338		0		
Cuyahoga Falls	13,700	2	13	13	.95	0		
East Cleveland	37,600	3	214	25	.66	0		
East Liverpool	22,000			1	.05	0		
Elyria	23,800	3	10	3	.13	0		
Findlay	18,200	3	3	80	4.40	0		
Fremont	13,900	3	7	2	.14	0		
Hamilton	42,400			4	.09	0		
Ironton	14,500	2	1	2	.14	0		
Kenmore	19,400			16	.82	0		
Lancaster	16,100	1	1	1	.06	0		
Lima	46,700	3	5	17	.36	0		
Lorain	42,300	3	47	17	.40	0		
Mansfield	31,800	3	27	57	1.79	0		
Marietta	15,300	1	26	105	6.86	0		
Marion	32,500	1	2	6	.18	0		
Newark	30,500			70	2.30	0		
Niles	16,600	3	16	20	1.20	0		
Norwood	29,900	3	8	5	.17	0		
Piqua	16,000	3	1	16	1.00	0		
Salem	11,100			122	10.99	0		
Sandusky	24,500	3	9	138	5.63	0		
Springfield	68,700	3	27	30	.44	0		
Steubenville	32,000			1	.03	0		
Oklahoma:								
Ardmore	17,200			48	2.79	0		
Oregon:								
Astoria	16,500	3	9	15	.91	0		
Eugene	11,400	3	5	14	1.23	0		
Pennsylvania:								
Allentown	92,200			19	.21	0		
Altoona	66,100			51	.77	0		
Beaver Falls	13,100	1	61	6	.46			
Braddock	21,700	3	3	41	1.89	0		
Bradford	15,800	3	15	39	2.47	0		
Butler	25,200	3	86	123	4.88	0		
Carlisle	11,400	3	53	33	2.89			
Carnegie	12,400	2	17	2	.16	0		
Carrick	13,000	2	6	3	.23			

Reported Prevalence for the Year 1925—Continued

MUMPS—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
Pennsylvania—Continued								
Chambersburg	13,900	3	37	29	2.09	0		
Charleroi	12,600	3	30	26	2.06			
Clairton	14,900	1	20	148	9.93	0		
Coatesville	16,500	2	101	4	.24	0		
Columbia				2				
Connellsville	14,300	2	5	14	.98	0		
Dubois	14,300	1	21	54	3.78			
Duquesne	20,900	1	5	3	.14	0		
Easton	36,800			131	3.56	0		
Farrell	18,700	3	46	11	.59	0		
Greensburg	16,100	1	5	16	.99	0		
Harrisburg	83,400	3	137	366	4.39	0		
Hazleton	36,100	3	52	3	.08	0		
Homestead	21,400	3	12	27	1.26	0		
Jeannette	11,700	3	12	1	.09	0		
Kingston	18,000	2	75	3	.17	0		
Lancaster	56,500	3	184	170	3.01	0		
Lansford		1	2	3		0		
Latrobe				20		0		
Lewistown		1	132	2		0		
McKees Rocks	18,100	2	30	4	.22	0		
McKeesport	49,100	3	4	103	2.10	0		
Meadville	15,600			2	.13	0		
Monessen	21,200	3	19	2	.09	0		
New Castle	49,800	2	25	28	.56	0		
Norristown	34,800	3	34	134	3.85	0		
North Braddock	16,700	3	3	19	1.14	0		
Oil City	23,300	3	82	142	6.09			
Phoenixville		3	47	98				
Sharon	25,000	3	105	13	.52	0		
Steelton		3	32	35		0		
Sunbury	16,800	3	35	40	2.38	0		
Swissvale	12,900	3	16	75	5.81	0		
Uniontown		3	4	64		0		
Vandergrift				55		0		
Warren	15,100	3	11	680	45.03	0		
Washington	23,000	3	31	250	10.87			
Waynesboro				35				
West Chester		3	85	201		0		
Wilkes-Barre	77,600	1	51	10	.13	0		
Wilkinsburg	27,400	1	53	157	5.73	0		
Windber				4		0		
Woodlawn	18,900	3	17	214	11.32	0		
York	49,100	2	44	13	.26	0		
Rhode Island:								
Cranston	34,500	3	6	5	.14	0		
Pawtucket	69,800			2	.03	0		
South Carolina:								
Charleston	73,100			5	.07	0		
Florence	13,200			35	2.65	0		
Greenville	27,300	3	24	3	.11	0		
Spartanburg	25,500	2	2	48	1.88	0		
Sumter		2	1	56		0		
South Dakota:								
Aberdeen	15,000	2	12	330	22.00			
Sioux Falls	30,100	3	1	1	.03	0		
Tennessee:								
Chattanooga	66,600			2	.03			
Knoxville	95,500	1	4	5	.05	0		
Texas:								
Cleburne	14,200			60	4.23	0		
Corpus Christi	11,800			100	8.47	0		
Galveston	48,400			16	.33	0		
Orange				3		0		
Palestine	11,400			1	.09			
Waco	43,900	3	2	9	.21	0		
Utah:								
Ogden	36,900	3	150	135	3.66	0		
Provo	11,200	2	78	10	.89	0		

Reported Prevalence for the Year 1925—Continued

MUMPS—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Vermont								
Barre		3	22	152		0		
Bennington		2	25	4		0		
Burlington	24,100	3	7	304	12.61	0		
Rutland	15,800	1	3	67	4.24	0		
Virginia								
Alexandria	18,500	3	4	136	7.35	0		
Charlottesville	11,200			17	1.52	0		
Danville	23,000	3	12	109	4.74	0		
Lynchburg	30,400	3	122	604	19.86	0		
Newport News	47,100	3	76	83	1.76	0		
Portsmouth	59,000	3	3	27	.46	0		
Roanoke	58,200	2	36	18	.31	0		
Suffolk				2		0		
Washington								
Bremerton		2	76	78		0		
Everett	29,300	3	7	26	.89	0		
Vancouver	14,500	2	12	147	10.14	0		
Walla Walla				5		0		
Yakima	22,700	3	58	689	30.35	0		
West Virginia								
Charleston	49,000	3	28	23	.47	0		
Clarksburg	30,400	3	25	195	6.41	0		
Fairmont	21,000			93	4.43			
Morgantown	13,800			1	.07	0		
Wheeling		3	27	34		0		
Wisconsin								
Appleton	21,100	3	4	20	.95	0		
Beloit	24,800	3	78	100	4.03	0		
Eau Claire	22,400			7	.31	0		
Fond du Lac	26,000			7	.27	0		
Green Bay	34,300	2	15	62	1.81	0		
Janesville	20,800	3	8	75	3.61	0		
Kenosha	50,900	3	257	20	.39	0		
La Crosse	30,400	3	94	376	12.37	0		
Madison	46,400			2,248	48.45			
Manitowoc	22,100	1	12	16	.72	0		
Racine	67,700	3	12	264	3.90	0		
Sheboygan	33,500	3	15	28	.84	0		
Waukesha	14,700			42	2.86	0		
Wausau	20,100	3	3	47	2.34	0		
West Allis	18,400			6	.33	0		
Wyoming								
Cheyenne	15,500			5	.32	0		

PELLAGRA

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama:						
Anniston	20,500	2	.10	0		
Florence	12,700	3	.24	1	0.08	3.0
Mobile	66,000			19	.29	
Montgomery	46,500			13	.28	
Selma	17,900			9	.53	
Tuscaloosa	13,100	31	2.37	20	1.53	1.5
Arizona:						
Phoenix	38,700			1	.03	
Tucson	26,700			1	.04	

Reported Prevalence for the Year 1925—Continued

PELLAGRA—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Arkansas						
Hot Springs		1				
Little Rock	74, 200			12	0 16	
California						
Bakersfield	23, 500	2	0 09	2	09	1 0
Long Beach	91, 200	1	01	0		
Sacramento	72, 300			3	04	
San Bernardino	22, 800			1	04	
Santa Ana	19, 500	1	05	0		
Stockton	47, 300	3	06	1	02	3 0
Florida						
Tampa	94 700	11	12	7	07	1 6
West Palm Beach				1		
Georgia						
Albany	13, 500			3	22	
Augusta	55, 200			13	24	
Brunswick	16, 800			1	06	
Lagrange	23, 500			11	47	
Rome	13, 900	5	36	4	29	1 2
Savannah	93, 100			14	15	
Illinois						
Granite City	18, 200			1	05	
Moline	33, 900	1	03	0		
Springfield	63, 900	1	02	1	02	1 0
Indiana,						
Terre Haute	71 100	1	01	1	.01	1 0
Kansas						
Parsons	14, 800	6	41	1	07	6 0
Pittsburg	19, 200	1	.05	1	05	1 0
Kentucky						
Paducah	25, 900			2	08	
Louisiana						
Baton Rouge	27, 800	1	04	1	04	1 0
Shreveport	57, 900			[1]60	1 04	
Massachusetts						
Arlington	24, 900	1	04	0		
Brockton	65, 300	1	02	0		
Chicopee	41, 900	1	02	0		
Danvers	11, 800			4	.34	
Waltham	34, 700	1	03	0		
Minnesota						
Rochester	17, 000			1	.06	
Mississippi						
Biloxi	12, 600	1	.08	0		
Jackson	23, 700	117	4 94	13	55	9 0
Laurel	15, 700	19	1.21			
Meridian	24, 300	7	29			
Natchez	13, 100	17	1 30	3	.23	5 7
Missouri						
St Joseph	78, 300			1	.01	
New Mexico						
Albuquerque	21, 000	2	10	0		
North Carolina						
Charlotte	53, 300			13	.24	
Raleigh	30, 400			16	53	
Wilmington	37, 100			1	03	
Wilson	12 800			1	08	
Winston-Salem	69, 000	18	26	16	23	1 1
Oklahoma						
Ardmore	17, 200	8	47	4	.23	2.0
Okmulgee	25, 300	10	40	3	12	3.3
Sapulpa	14, 200	1	07	0		
Pennsylvania						
Allentown	92, 200	1	01	1	01	1 0
Homestead	21, 400			1	05	
South Carolina						
Anderson	11, 100	2	18	0		
Charleston	73, 100			33	45	
Greenville	27, 300			3	.11	
Spartanburg	25, 500			6	24	
Sumter				5		
Tennessee						
Knoxville	95, 500			41	.43	

[1] Includes nonresidents

Reported Prevalence for the Year 1925—Continued

PELLAGRA—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Texas						
Beaumont	50,600			5	0 10	
Cleburne	14,200	4	0 28	4	.28	1 0
Corpus Christi	11,800	2	17	1	08	2 0
Galveston	48,400			6	.12	
Orange		12		0		
Palestine	11,400	4	35			
San Angelo				2		
Tyler	13,000			3	23	
Waco	43,900			8	.18	
Vermont						
Burlington	24,100			1	04	
Virginia						
Danville	23,000			6	26	
Lynchburg	30,400			4	13	
Newport News	47,100	1	02	1	02	1 0
Petersburg	35,700	5	14	1	03	5 0
Portsmouth	59,000			3	05	
West Virginia						
Bluefield	19,300			12	.62	

PNEUMONIA (ALL FORMS)

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama						
Anniston	20,500	63	3 07	61	2.98	1 0
Dothan	14,500	41	2.83	18	1 24	2 3
Florence	12,700	30	2.36	22	1 73	1 4
Mobile	66,000			52	.79	
Montgomery	46,500			64	1 38	
Selma	17,000			57	3 35	
Tuscaloosa	13,100	43	3 28	21	1 60	2 0
Arizona:						
Phoenix	38,700			86	2 22	
Tucson	26,700			40	1 50	
Arkansas						
Hot Springs		1				
Little Rock	74,200	88	1 19	72	.97	1 2
California:						
Alameda	31,900	35	1 10	32	1 00	1.1
Alhambra		18		14		1 3
Bakersfield	23,500			26	1 11	
Berkeley	66,200	[2] 34	[1] 51	35	.53	
Chico		9		5		1 8
Eureka	13,500			14	1 04	
Fresno	58,500	10	.17	0		
Glendale	21,300	[2] 11	[1].52	33	1 55	
Long Beach	91,200	119	1 30	92	1 01	1 3
Pasadena	56,700	91	1 60	50	88	1 8
Pomona	15,400			21	1 36	
Richmond	22,500	16	.71	11	49	1 5
Riverside		55		26		2.1
Sacramento	72,300			116	1.60	
San Bernardino	22,800			35	1 53	
San Jose	43,600			32	.73	
Santa Ana	19,500			19	.97	
Santa Barbara	24,000			41	1 71	
Santa Monica	19,400			37	1 91	
Stockton	47,300	55	1 16	45	95	1.2
Vallejo	26,600			12	.45	
Colorado:						
Boulder	11,800	46	3 90	18	1 52	2.6
Colorado Springs		66		60		1 1
Greeley	12,500			16	1 28	
Pueblo	43,800			95	2 17	
Trinidad	11,000			40	3 64	
Connecticut:						
Danbury				26		
Fairfield	14,500	19	1.31	6	.41	3 2
Greenwich	25,300	84	3.32	26	1.03	3 2
Manchester	21,000	61	2 90			
Meriden	36,300	128	3.53			

[2] Lobar pneumonia only.

Reported Prevalence for the Year 1925—Continued

PNEUMONIA (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Connecticut—Continued						
Milford	13,500	27	2.00	14	1.04	1.9
New Britain	68,000	216	3.18	96	1.41	2.2
New London	29,100			36	1.24	
Norwich	23,100	11	.48	5	.22	2.2
Shelton				17		
Stamford	40,700	30	.74	21	.52	1.4
Stratford	16,100	41	2.55	8	.50	5.1
Florida						
St Petersburg	26,800			54	2.01	
Tampa	94,700			105	1.11	
West Palm Beach				73		
Georgia						
Albany	13,500			32	2.37	
Augusta	55,200			103	1.87	
Brunswick	16,800	9	.54	8	.48	1.1
Lagrange	23,500			21	.89	
Rome	13,900	65	4.68	16	1.15	4.1
Savannah	93,100			112	1.20	
Idaho						
Pocatello	18,300	13	.71	4	.22	3.2
Illinois						
Alton	26,800			29	1.08	
Aurora	40,300	74	1.84	0		
Berwyn	18,900	31	1.64	10	.53	3.1
Bloomington	30,400			59	1.94	
Blue Island	13,200			17	1.29	
Champaign	18,200	30	1.65	16	.88	1.9
Chicago Heights	22,100			48	2.17	
Cicero	62,200	63	1.01	25	.40	2.5
Danville	37,000	120	3.24	35	.95	3.4
Decatur	53,900	89	1.65	61	1.13	1.5
East Moline		11		3		3.7
East St Louis	71,400			105	1.47	
Elgin	33,400	39	1.17	27	.81	1.4
Evanston	43,900	59	1.34	49	1.12	1.2
Freeport	20,700	32	1.55	14	.68	2.3
Galesburg	24,800	28	1.13	24	.97	1.2
Granite City	18,200			36	1.98	
Jacksonville	15,900	46	2.89	42	2.64	1.1
Joliet	40,600	52	1.28	43	1.06	1.2
Kewanee	19,700	59	2.99	25	1.27	2.4
La Salle	13,900	32	2.30	19	1.37	1.7
Maywood	14,200	41	2.89	14	.99	2.9
Moline	33,900	64	1.89	16	.47	4.0
Murphysboro	12,500			6	.48	
Oak Park	51,400	142	2.76	65	1.26	2.2
Ottawa	11,500	4	.35	1	.09	4.0
Pekin	13,300	11	.83	5	.38	2.2
Peoria	81,600			142	1.74	
Quincy		68		17		4.0
Rock Island	40,000	38	.95	4	.10	9.5
Rockford	76,500	117	1.53	42	.55	2.8
Springfield	63,900	87	1.36	53	.83	1.6
Streator	15,100			17	1.13	
Waukegan	22,000	47	2.14	7	.32	6.7
Indiana						
Anderson	33,900			21	.62	
Bloomington	12,600	27	2.14	19	1.51	1.4
Connersville	12,500	40	3.20	14	1.12	2.9
Crawfordsville	10,500			12	1.14	
East Chicago	45,600			124	2.72	
Elwood				11		
Fort Wayne	97,800			100	1.02	
Frankfort	13,100			24	1.83	
Hammond	50,400			78	1.55	
Huntington	15,900			4	.25	
Jeffersonville		10				
Kokomo	36,900			36	.98	
La Fayette	23,800	4	.17			
Logansport	23,100	5	.22	2	.09	2.5
Marion	26,300			28	1.06	
Michigan City	20,300			17	.84	
Mishawaka	16,700			31	1.86	
Muncie	42,500			53	1.25	
New Albany				23		

Reported Prevalence for the Year 1925—Continued

PNEUMONIA (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Indiana—Continued						
Newcastle	17,000			18	1.06	
Peru	12,700			10	.79	
Richmond	30,500			18	.59	
South Bend	80,100			123	1.54	
Terre Haute	71,100			111	1.56	
Wabash				13	1.23	
Whiting	12,200			17	1.39	
Iowa						
Boone	12,800			16	1.25	
Burlington	26,400	58	2.20	22	.83	2.6
Cedar Rapids	50,600			35	.69	
Council Bluffs	39,800			72	1.81	
Dubuque	41,000			56	1.37	
Iowa City	15,300	1	.07			
Mason City	22,700			26	1.15	
Muscatine	16,800	26	1.55	20	1.19	1.3
Kansas						
Arkansas City	14,000			12	.86	
Coffeyville	16,200			20	1.23	
Emporia	12,200	34	2.79	22	1.80	1.5
Fort Scott	11,800	10	.85	5	.42	2.0
Hutchinson	26,000	36	1.38			
Independence	10,900			11	1.01	
Lawrence	12,300	22	1.79	14	1.14	1.6
Leavenworth	20,900	5	.24	0		
Parsons	14,800	27	1.82	16	1.08	1.7
Pittsburg	19,200	23	1.20	20	1.04	1.1
Topeka	55,400	104	1.88	21	.38	5.0
Wichita	88,400			67	.76	
Kentucky						
Covington	58,300			96	1.65	
Henderson	12,600			21	1.67	
Newport				46		
Paducah	25,900	43	1.66	35	1.35	1.2
Louisiana						
Baton Rouge	27,800			23	.83	
Lake Charles				16		
Shreveport	57,900			[1] 137	2.37	
Maine						
Auburn	18,100			11	.61	
Bangor	26,600			25	.94	
Bath	17,800	26	1.12	14	.79	1.9
Biddeford	18,500			37	2.00	
Lewiston	34,900			48	1.38	
Portland	75,300			91	1.21	
Sanford	11,600	14	1.21	6	.52	2.3
South Portland		6				
Waterville	14,400			13	.90	
Westbrook		2		2		1.0
Massachusetts [2]						
Adams	13,500	11	.81	11	.81	
Amesbury	11,200	25	2.23	18	1.61	
Arlington	24,900	39	1.57	35	1.41	
Athol				17		
Attleboro	20,600	18	.87	19	.92	
Belmont	15,300	21	1.37	17	1.11	
Beverly	22,700	70	3.08	22	.97	
Braintree	13,200	6	.45	14	1.06	
Brockton	65,300	76	1.16	63	.96	
Brookline	42,700	38	.89	35	.82	
Chelsea	47,200	83	1.76	85	1.80	
Chicopee	41,900	29	.69	42	1.00	
Clinton	14,200	43	3.03	25	1.76	
Danvers	11,800	20	1.69	39	3.31	
Dedham	13,900	17	1.22	7	.50	
Easthampton	11,600	41	3.53	16	1.38	
Everett	42,100	77	1.83	23	.55	3.3
Framingham	21,100	20	.95	31	1.47	
Gardner	18,700	19	1.02	39	2.09	
Gloucester	23,400	15	.64	20	.85	
Greenfield	15,200	9	.59	12	.79	
Haverhill	49,200	115	2.34	73	1.48	

[1] Includes nonresidents [2] Cases of pneumonia reported by cities are lobar only.

Reported Prevalence for the Year 1925—Continued

PNEUMONIA (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Massachusetts—Continued						
Holyoke	60,300	41	0.68	84	1.39	
Lawrence	93,500	73	.78	36	.39	
Leominster	22,100	59	2.67	35	1.58	
Malden	51,800	89	1.72	60	1.16	
Marlboro	16,200	28	1.73	34	2.10	
Medford	47,600	78	1.64	50	1.05	
Melrose	20,200	40	1.98	0		
Methuen	20,600	18	.87	26	1.26	
Milford	14,800	8	.54	36	2.43	
Milton		9		9		
Newburyport	15,700	24	1.53	24	1.53	
Newton	53,000	57	1.08	25	.47	
North Adams	22,700	6	.26	40	1.76	
Northampton	24,100	[1] 25	1.04	14	.58	
Northbridge	10,100	6	.59	13	1.29	
Palmer				5		
Peabody	19,900	52	2.61	25	1.26	
Pittsfield	46,900	30	.64	28	.60	
Plymouth	13,200	20	1.52	19	1.44	
Quincy	60,100	49	.82	45	.75	
Revere	33,300	43	1.29	49	1.47	
Salem	42,800	46	1.07	8	.19	
Saugus	12,700	43	3.39	14	1.10	
Somerville	99,000	147	1.48	113	1.14	
Southbridge	15,500	13	.84	4	.26	
Taunton	39,300	21	.53	52	1.32	
Wakefield	15,600	21	1.35	12	.77	
Waltham	34,700	50	1.44	30	.86	
Watertown	25,500	40	1.57	12	.47	
West Springfield	15,300	11	.72			
Westfield	19,300	30	1.55	30	1.55	
Winchester	11,600	17	1.47	19	1.64	
Winthrop	16,200	12	.74	15	.93	
Woburn	18,400	19	1.03	29	1.58	
Michigan:						
Adrian	12,500	15	.20			
Ann Arbor	22,200	34	1.53	8	.36	4.3
Battle Creek	42,300	28	.66	8	.19	3.5
Bay City	48,900	60	1.23	37	.76	1.6
Benton Harbor	14,000	17	1.21	3	.21	5.7
Cadillac		13		11		1.2
Hamtramck	81,700	60	.73	47	.58	1.3
Highland Park	72,300	120	1.66	41	.57	2.9
Holland	13,100	9	.69	2	.15	4.5
Ironwood	17,400	15	.86	9	.52	1.7
Ishpeming		31		19		1.6
Jackson	58,000	[2] 43	[2] .74	35	.60	
Kalamazoo	53,600	106	1.98	60	1.12	1.8
Lansing	70,800	74	1.04	60	.85	1.2
Marquette	13,400	46	3.43	13	.97	3.5
Muskegon	43,100	57	1.32	45	1.04	1.3
Muskegon Heights				13		
Pontiac	47,500	101	2.13	53	1.12	1.9
Port Huron	30,000	34	1.13	22	.73	1.5
River Rouge		23		11		2.1
Saginaw	72,100			74	1.03	
Sault Ste Marie		28		13		2.2
Minnesota:						
Brainerd				17		
Faribault	12,300			34	2.76	
Hibbing	18,000	6	.33			
Mankato	13,700			21	1.53	
Rochester	17,000			16	.94	
St Cloud	18,900	3	.16	0		
Virginia	16,000			21	1.31	
Winona	19,500	11	.56			
Mississippi:						
Biloxi	12,600	20	1.59	12	.95	1.7
Jackson	23,700	293	12.36	18	.76	16.3
Laurel	15,700	122	7.76			
Meridian	24,300	99	4.07			
Natchez	13,100	30	2.29	5	.38	6.0

[1] Includes nonresidents. [2] Lobar pneumonia only

Reported Prevalence for the Year 1925—Continued

PNEUMONIA (ALL FORMS)—*Continued*

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Missouri						
Independence	12,700			38	2.99	
Moberly	13,900			16	1.15	
St. Joseph	78,300			123	1.57	
Springfield	42,100	70	1.66	67	1.59	1.0
Montana						
Anaconda	12,500			25	2.00	
Butte	42,900			122	2.84	
Great Falls	29,900			21	.70	
Helena				19		
Missoula		42		30		1.4
Nebraska						
Lincoln	60,900			44	.72	
North Platte	13,700			18	1.31	
Nevada						
Reno	12,700			21	1.65	
New Hampshire						
Claremont				19		
Concord	22,500			48	2.13	
Dover				17		
Keene	11,900	26	2.18	16	1.34	1.6
Manchester	83,100			71	.85	
Nashua	29,700			53	1.78	
Portsmouth	14,900	11	.74			
New Jersey						
Asbury Park	13,700			16	1.17	
Bayonne	88,800			104	1.17	
Belleville	18,900	46	2.43	15	.79	3.1
Bloomfield	26,000	56	2.15	12	.46	4.7
Bridgeton	14,400			20	1.39	
Carteret	14,000			13	.93	
Clifton	34,700	40	1.15	21	.61	1.9
Collingswood				4		
Dover		41		13		3.2
East Orange	60,000	129	2.15	25	.42	5.2
Englewood	12,600	22	1.75	11	.87	2.0
Garfield	24,600	54	2.20	25	1.02	2.2
Gloucester City	13,700	23	1.68	13	.95	1.8
Hackensack	19,700	55	2.79	30	1.52	1.8
Harrison	16,400	36	2.20			
Hoboken				117		
Irvington	33,200	69	2.08	27	.81	2.6
Kearny	31,300	65	2.08	26	.83	2.5
Lodi				6		
Long Branch	13,600	30	2.21	19	1.40	1.6
Montclair	32,900	103	3.13	46	1.40	2.2
Morristown	12,600	31	2.46	6	.48	5.2
New Brunswick	38,000			45	1.18	
Nutley		31		0		
Orange	35,400	98	2.77	35	.99	2.8
Passaic	69,000			78	1.13	
Perth Amboy	47,100			56	1.19	
Phillipsburg	18,600	3	.16			
Plainfield	31,700	99	3.12	32	1.01	3.1
Rahway	12,000	8	.67			
Red Bank				6		
Ridgefield Park		21		12		1.7
Rutherford		26		7		
Summit	11,700	54	4.62	22	1.88	2.5
Union City	63,100	12	.19			
West New York	39,200			19	.48	
West Orange	18,200	64	3.52	12	.66	5.3
New Mexico						
Albuquerque	21,000			31	1.48	
New York						
Amsterdam	35,300	84	2.38	30	.85	2.8
Binghamton	71,900	327	4.55	43	.60	7.6
Cohoes	23,000	77	3.35	18	.78	4.3
Corning	15,700			15	.96	
Cortland	13,900	32	2.30	24	1.73	1.3
Dunkirk	19,900	54	2.71	10	.50	5.4
Elmira	48,400	207	4.28	70	1.45	3.0
Freeport		24		11		2.2
Geneva	15,900	31	1.95	19	1.19	1.6
Glens Falls	17,900	65	3.63	23	1.28	2.8

Reported Prevalence for the Year 1925—Continued

PNEUMONIA (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
New York—Continued						
Gloversville	22,100	50	2.26	17	0.77	2.9
Hornell	15,800	39	2.47	17	1.08	2.3
Hudson	11,800	38	3.22	18	1.53	2.1
Ithaca	18,900	68	3.60			
Jamestown	43,400	94	2.17	40	.92	2.2
Johnson City		51		22		2.3
Johnstown	10,700			12	1.12	
Kingston	28,100			42	1.49	
Lackawanna	20,200	163	8.07	39	1.93	4.2
Little Falls	12,400	13	1.05	11	.89	1.2
Lockport	21,700	50	2.30	31	1.43	1.6
Middletown	20,400	75	3.68	12	.59	6.2
Mount Vernon	50,400	112	2.22	49	.97	2.3
New Rochelle	44,200	84	1.90	50	1.13	1.7
Newburgh	30,400	44	1.45	37	1.22	1.2
Niagara Falls	57,000	169	2.96	103	1.91	1.6
North Tonawanda	17,400	31	1.78	16	.92	1.9
Olean	21,300	53	2.49	16	.75	3.3
Peekskill	18,000	59	3.28	21	1.17	2.8
Plattsburg	11,600			16	1.38	
Poughkeepsie	35,700	82	2.30	42	1.18	2.0
Rensselaer	11,400	46	4.04	11	.96	4.2
Rome	30,300	41	1.35	22	.73	1.9
Salamanca		21		13		1.6
Saratoga Springs	13,900	83	5.97	29	2.09	2.9
Schenectady	92,800	256	2.76	81	.87	3.2
Troy	72,200	211	2.92	102	1.41	2.1
Watertown	32,800	52	1.59	49	1.49	1.1
Watervliet	16,200	18	1.11	12	.74	1.5
White Plains	27,400	94	3.43	23	.84	4.1
North Carolina						
Charlotte	53,300			112	2.10	
Greensboro	47,100			48	1.02	
High Point	23,600			30	1.27	
New Bern	12,200			28	2.29	
Raleigh	30,400			53	1.74	
Rocky Mount	15,100			24	1.59	
Salisbury	17,700			14	.79	
Wilmington	37,100			60	1.62	
Wilson	12,800			25	1.95	
Winston-Salem	69,000			117	1.70	
Ohio						
Ashtabula	25,100			21	.84	
Barberton	23,300			27	1.16	
Bellaire	16,300			20	1.23	
Bellefontaine				5		
Bucyrus	11,700			13	1.11	
Cambridge	14,000			12	.86	
Chillicothe	16,600			16	.96	
Cleveland Heights	22,200			20	.90	
Conneaut		9		8		1.1
Coshocton	11,600			16	1.38	
Cuyahoga Falls	13,700			9	.66	
East Cleveland	37,600	51	1.36	19	.51	2.7
East Liverpool	22,000			53	2.41	
East Youngstown (Campbell)	16,000			31	1.94	
Elyria	23,800			23	.97	
Findlay	18,200	27	1.48	23	1.26	1.2
Fostoria				5		
Fremont	13,900			12	.86	
Hamilton	42,400			62	1.46	
Ironton	14,500			27	1.86	
Kenmore	19,400	23	1.19	13	.67	1.8
Lakewood	56,800			40	.70	
Lima	46,700			48	1.03	
Lorain	42,300			65	1.54	
Mansfield	31,800	118	3.71	35	1.10	3.4
Marietta	15,300			17	1.11	
Marion	32,500			26	.80	
Martins Ferry	15,500			23	1.48	
Middletown	30,800	51	1.66	39	1.27	1.3
Newark	30,500			32	1.05	
Niles	16,600			11	.66	
Norwood	29,900	14	.47	12	.40	1.2

Reported Prevalence for the Year 1925—Continued

PNEUMONIA (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Ohio—Continued						
Piqua	16,000	9	0.56	1	0.06	9.0
Salem	11,100			20	1.80	
Sandusky	24,400	23	.94	11	.45	2.1
Springfield	68,700			90	1.31	
Steubenville	32,000			52	1.63	
Zanesville	30,400			51	1.68	
Oklahoma						
Ardmore	17,200	83	4.83	25	1.45	3.3
Guthrie	11,800			12	.02	
Okmulgee	25,300	49	1.94	24	.95	2.0
Sapulpa	14,200	25	1.76	4	.28	6.2
Oregon						
Astoria	16,500			18	1.09	
Eugene	11,400			21	1.84	
Pennsylvania						
Allentown	92,200			148	1.61	
Altoona	66,100			101	1.53	
Beaver Falls	13,100	8	.61			
Braddock	21,700			70	3.23	
Butler	25,200			29	1.15	
Canonsburg	13,500			21	1.56	
Carbondale	19,500	1	.05			
Carlisle	11,400	17	1.49			
Carnegie	12,400			16	1.29	
Carrick	13,000	8	.62			
Clairton	14,900	7	.47	6	.40	1.2
Coatesville	16,500			14	.85	
Connellsville	14,300			32	2.24	
Easton	36,800			24	.65	
Harrisburg	83,400			115	1.38	
Homestead	21,400			59	2.76	
Jeannette	11,700			16	1.37	
Kingston	18,000			24	1.33	
Lancaster	56,500			80	1.42	
Latrobe		5		1		5.0
Lewistown				10		
McKees Rocks	18,100	16	.88	5	.28	3.2
McKeesport	49,100			131	2.67	
Monessen	21,200	[2] 5	[2] .24	2	.09	
Nanticoke	24,700			51	2.06	
New Castle	49,800			95	1.91	
Norristown	34,800			42	1.21	
North Braddock	16,700			24	1.44	
Oil City	23,300	3	.13			
Olyphant	11,200			20	1.79	
Pottstown	18,500			45	2.43	
Sharon	25,000			36	1.44	
Steelton				19		
Sunbury	16,800	30	1.79	10	.60	3.0
Swissvale	12,900	23	1.78	20	1.55	1.1
Vandergrift				12		
Warren	15,100			12	.79	
Washington	23,000	3	.13			
West Chester				37		
Wilkes-Barre	77,600			114	1.47	
Wilkinsburg	27,400			108	3.94	
Windber				16		
Woodlawn	18,900	29	1.53	21	1.11	1.4
York	49,100			80	1.63	
Rhode Island						
Cranston	34,500			31	.90	
Newport	27,800			26	.94	
Pawtucket	69,800			62	.89	
Woonsocket	49,700			88	1.77	
South Carolina						
Anderson	11,100	14	1.26	3	.27	4.7
Charleston	73,100			123	1.68	
Greenville	27,300			38	1.39	
Spartanburg	25,500			29	1.14	
Sumter				10		

[2] Lobar pneumonia only.

Reported Prevalence for the Year 1925—Continued

PNEUMONIA (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
South Dakota:						
Sioux Falls	30,100			26	0.86	
Tennessee:						
Chattanooga	66,600	54	0.81			
Knoxville	95,500			102	1.07	
Texas:						
Beaumont	50,600			77	1.52	
Cleburne	14,200	40	2.82			
Corpus Christi	11,800	25	2.12	6	.51	4.2
Galveston	48,400			64	1.32	
Greenville	14,400			6	.42	
Orange		34		6		5.7
Palestine	11,400	11	.96			
San Angelo				18		
Texarkana	12,400	20	1.61	3	.24	6.7
Tyler	13,000			14	1.08	
Waco	43,900			69	1.57	
Utah:						
Logan				19		
Ogden	36,900			52	1.41	
Provo	11,200			8	.71	
Vermont:						
Barre				20		
Bennington		30		23		1.3
Burlington	24,100			37	1.54	
Rutland	15,800	16	1.01			
Virginia:						
Alexandria	18,500	39	2.11	29	1.57	1.3
Charlottesville	11,250			14	1.25	
Danville	23,000			30	1.30	
Lynchburg	30,400			27	.89	
Newport News	47,100			80	1.70	
Petersburg	35,700			40	1.12	
Portsmouth	59,000			79	1.34	
Roanoke	58,200			54	.93	
Suffolk				43		
Washington:						
Aberdeen	16,200			29	1.79	
Bremerton		21		9		2.3
Vancouver	14,500			13	.90	
Walla Walla				12		
Yakima	22,700			23	1.01	
West Virginia:						
Bluefield	19,300			10	.52	
Charleston	49,000			30	.61	
Clarksburg	30,400			44	1.45	
Martinsburg	13,500			41	3.04	
Morgantown	13,800			37	2.68	
Parkersburg	21,300			17	.80	
Wheeling				106		
Wisconsin:						
Appleton	21,100			26	1.23	
Beloit	24,800	16	.65	0		
Eau Claire	22,400	29	1.29	24	1.07	1.2
Fond du Lac	26,000			25	.96	
Green Bay	34,300			35	1.02	
Janesville	20,800			15	.72	
Kenosha	50,900	46	.90	38	.75	1.2
Manitowoc	22,100			13	.59	
Marinette				13		
Oshkosh	33,200			29	.87	
Racine	67,700	76	1.12	42	.62	1.8
Sheboygan	33,500			40	1.19	
Superior				49		
Waukesha	14,700			12	.82	
Wausau	20,100			29	1.44	
West Allis	18,400			37	2.01	
Wyoming:						
Cheyenne	15,500			16	1.03	

Reported Prevalence for the Year 1925—Continued

POLIOMYELITIS (INFANTILE PARALYSIS)

City	Estimated population July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Alabama								
Tuscaloosa	13,100			1	0.08	0		
Arizona								
Phoenix	38,700	2	0	8	21	5	0.13	62.0
Arkansas								
Little Rock	74,200	7	0	1	01	1	01	100.0
California								
Alameda	31,900	7	1	12	38	0		
Alhambra		2	1	6		0		
Bakersfield	23,500	7	1	6	26	4	17	66.7
Berkeley	66,200	7	1	32	48	1	02	3.1
Chico		2	1	2				
Fresno	58,500	5	1	11	19	1	02	9.1
Glendale	21,500	4	1	4	19	1	05	25.0
Long Beach	91,200	7	2	12	13	3	03	25.0
Modesto		2	0	11		0		
Pasadena	56,700	7	1	6	.11	2	04	33.3
Pomona	15,400	5	2	6	39	0		
Richmond	22,500	3	0	2	09	1	04	50.0
Sacramento	72,300	7	1	17	24	5	.07	29.4
San Bernardino	22,800			5	22	3	13	60.0
San Jose	43,600	4	0	4	09	0		
Santa Ana	19,500	4	0	2	10	0		
Stockton	47,400	4	1	9	19	1	02	11.1
Vallejo	26,600	1	8			3	.11	37.5
Colorado								
Colorado Springs		7	0	1		0		
Trinidad	11,000	4	1	11	1.00	0		
Connecticut								
Greenwich	25,300	7	1	1	.04	1	04	100.0
Manchester	21,000	4	1	1	05			
Shelton		1	0	2		2		100.0
Stamford	40,700	2	0	2	05			
Stratford	16,100	4	1	2	12	2	.12	100.0
Florida								
St Petersburg	26,800			4	15	0		
Tampa	94,700	3	0	1	01	0		
West Palm Beach				1		1		100.0
Georgia								
Augusta	55,200	5	1	5	09	1	02	20.0
Savannah	93,100	6	0	3	03	0		
Idaho								
Boise	23,000	5	1	2	09	1	.04	50.0
Illinois								
Alton	26,800	5	3			1	.04	
Aurora	40,300	7	1	3	07	1	02	33.3
Berwyn	18,900	3	1	2	11	0		
Bloomington	30,400	5	1	2	07	0		
Champaign	18,200	4	1	1	05	0		
Chicago Heights	22,100	4	1	3	14			
Decatur	53,900	3	0	1	02	0		
East St Louis	71,400	6	2	1	.01	1	01	100.0
Elgin	33,400	5	3	1	03	1	03	100.0
Evanston	43,900	7	2	2	.05	0		
Freeport	20,700	5	1	2	10	1	.05	50.0
Galesburg	24,800	6	1	2	08	1	.04	50.0
Granite City	18,200	4	1			1	05	
Jacksonville	15,900	5	2	1	06	0		
Kewanee	19,700	3	0	5	.25	1	05	20.0
La Salle	13,900	6	1	2	14	0		
Moline	33,900	7	0	1	.03	1	03	100.0
Pekin	13,300	7	1	1	.08			
Peoria	81,000	7	1	7	09	0		
Rock Island	40,000	7	2	4	10	1	02	25.0
Rockford	76,500	7	1	11	.14	0		
Springfield	63,900	5	4	1	.02	1	.02	100.0
Indiana								
Fort Wayne	97,800	6	3			1	01	
Frankfort	13,100	6	1	2	15	0		
Huntington	15,900	5	0	1	.06	0		
Jeffersonville		3	0	2		2		100.0
Kokomo	36,900	6	1	1	03	0		

Reported Prevalence for the Year 1925—Continued

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Indiana—Continued								
Logansport	23,100	7	0	1	0 04	0		
Mishawaka	16,700	7	0			1	0 06	
Muncie	42,500	7	1	1	02	0		
New castle	17,000	6	0	3	18	3	.18	100 0
Iowa								
Burlington	26,400	6	1	1	04	0		
Cedar Rapids	50,600	7	1	7	14	0		
Council Bluffs	39,800	7	1	2	05	1	03	50 0
Fort Dodge	21,700	3	1	2	09	0		
Marshalltown	16,900	3	1	5	30			
Mason City	22,700	6	1	4	18	1	04	25 0
Muscatine	16,800	6	1	5	30			
Ottumwa	26,400	4	0	1	04	0		
Waterloo	36,800	4	2	1	03	0		
Kansas								
Hutchinson	26,000	5	1	1	04			
Topeka	55,400	5	3	6	11	0		
Wichita	88,400	7	1	10	11	2	02	20 0
Kentucky								
Paducah	25,900	7	0	3	12	3	.12	100 0
Louisiana								
Baton Rouge	27,800	4	1	2	07	1	04	50 0
Shreveport	57,900	3	0	3	05	0		
Maine								
Auburn	18,100	6	1	2	11	0		
Bath	17,800	5	1	3	17	0		
Lewiston	34,900					2	06	
Portland	75 300	5	1	1	01	1	01	100 0
Sanford	11,000	5	1	2	17	0		
Waterville	14,400	7	1			1	07	
Massachusetts								
Adams	13,500	7	1	3	22	0		
Amesbury	11,200	4	1	2	18	0		
Belmont	15,300	5	1	1	.07	0		
Beverly	22,700	7	1	3	13	1	04	33 3
Brockton	65,300	7	1	1	02	1	02	100 0
Brookline	42,700	7	1	6	14	0		
Chelsea	47,200	6	1	1	.02	1	02	100 0
Danvers	11,800	7	1	1	08	0		
Everett	42,100	7	5	2	.05	1	.02	50 0
Framingham	21,100	7	1	1	.05	0		
Haverhill	49,200	7	3	6	12	2	.04	33.3
Holyoke	60,300	7	2	1	02	0		
Lawrence	93,500	7	6	4	04	0		
Leominster	22,100	7	1	1	.05	0		
Malden	51,800	7	1	2	.04	0		
Medford	47,600	7	3	1	.02	0		
Melrose	20,200	7	1	2	10	0		
Newton	53,000	7	4	6	11	0		
North Adams	22,700	7	1	8	35	1	.04	12.5
Northbridge	10,100	7	1	2	20	0		
Palmer		2	0	1		0		
Pittsfield	46,900	6	2	4	.09	4	09	100 0
Quincy	60,100	7	2	4	07	0		
Salem	42,800	5	3	1	02	1	02	100 0
Somerville	99,000	7	3	1	01	0		
Taunton	39,300	5	0	1	03	1	03	100 0
Wakefield	15,600	5	1	1	06	0		
Waltham	34,700	7	1	3	.09	0		
Watertown	25,500	7	1	1	.04	0		
Winchester	11,600	5	1	2	17	2	17	100.0
Winthrop	16,200	7	1	1	06	0		
Woburn	18,400	5	1	2	11	0		
Michigan								
Adrian	12,500	2	0	1	08	0		
Battle Creek	42,300	7	2	2	05	1	02	50.0
Bay City	48,900	6	1	3	06	0		
Highland Park	72,300	7	1	2	.03	0		
Kalamazoo	53,600	7	1	2	04	1	.02	50 0
Lansing	70,800	6	2	1	01	0		

Reported Prevalence for the Year 1925—Continued

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued

City	Estimated population July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Michigan—Continued								
Port Huron	30,000	5	1	1	0 03	0	------	------
River Rouge	------	2	3	4	------	0	------	------
Saginaw	72,100	4	1	1	01	0	------	------
Sault Ste Marie	------	7	0	8	------	1	------	12 5
Minnesota								
Austin	11,900	5	1	3	25	2	0 17	66 7
Brainerd	------	------	------	5	------	1	------	------
Faribault	12,300	5	1	1	08	0	------	------
Mankato	13,700	5	1	17	1 24	2	15	11 8
Rochester	17,000	2	3	[1] 22	1 29	2	12	9 1
St Cloud	18,900	4	0	1	05	1	05	100 0
Winona	19,500	5	0	49	2 51	------	------	------
Mississippi								
Jackson	23,700	2	1	1	04	0	------	------
Missouri								
Independence	12,700	2	0	1	08	0	------	------
St Joseph	78,300	7	1	6	.08	0	------	------
Montana								
Anaconda	12,500	4	1	1	08	0	------	------
Great Falls	29,900	7	2	2	07	0	------	------
Missoula	------	6	1	1	------	1	------	100 0
Nebraska								
Lincoln	60,900	7	1	5	08	0	------	------
Nevada								
Reno	12,700	7	1	6	.47	2	.16	33 3
New Hampshire								
Claremont	------	2	2	2	------	1	------	50 0
Concord	22,500	7	0	3	13	0	------	------
Dover	------	7	1	2	------	0	------	------
New Jersey								
Bayonne	88,800	6	0	3	03	0	------	------
Belleville	18,900	6	1	------	------	1	.05	------
Bloomfield	26,000	7	1	2	.08	0	------	------
Clifton	34,700	5	1	6	.17	2	.06	33 3
East Orange	60,000	7	2	6	.10	3	.05	50 0
Englewood	12.600	7	1	1	.08	0	------	------
Garfield	24,600	4	0	3	12	0	------	------
Irvington	33,200	5	0	1	03	0	------	------
Kearny	31,300	7	1	3	10	1	03	33 3
Long Branch	13,600	7	1	1	.07	0	------	------
Montclair	32,900	7	1	2	.06	0	------	------
Orange	35,400	6	1	4	.11	0	------	------
Passaic	69,000	7	1	1	.01	0	------	------
Perth Amboy	47,100	7	1	1	.02	1	02	100 0
Plainfield	31,700	5	1	1	.03	0	------	------
Rahway	12,000	7	1	1	.08	0	------	------
Red Bank	------	1	1	1	------	0	------	------
Union City	63,100	------	------	2	03	------	------	------
West New York	39,200	6	1	2	.05	------	------	------
New York:								
Binghamton	71,900	7	1	2	.03	0	------	------
Cohoes	23,000	7	1	1	.04	0	------	------
Corning	15,700	6	0	1	.06	0	------	------
Cortland	13,900	7	1	13	.94	3	22	23 1
Dunkirk	19,900	7	1	1	.05	0	------	------
Elmira	48,400	5	1	3	.06	2	04	66 7
Geneva	15,900	6	1	3	19	0	------	------
Glens Falls	17,900	7	0	6	.34	0	------	------
Hornell	15,800	7	1	1	.06	0	------	------
Hudson	11,800	5	1	1	.08	0	------	------
Ilion	10,400	2	1	1	.10	0	------	------
Ithaca	18,900	7	2	5	26	1	05	20 0
Jamestown	43,400	7	2	5	.12	1	02	20 0
Johnson City	------	1	1	3	------	0	------	------
Johnstown	10,700	4	0	1	.09	0	------	------
Little Falls	12,400	7	1	3	.24	1	08	33 3
Lockport	21,700	5	0	9	.41	0	------	------
Middletown	20,400	7	1	17	.83	2	10	11 8
New Rochelle	44,200	6	2	3	.07	2	05	66 7

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
New York—Continued								
North Tonawanda	17,400	7	0	1	0.06	0		
Olean	21,300	7	1	3	14	0		
Poughkeepsie	35,700	7	2	3	08	0		
Rome	30,300	7	2	2	07	0		
Saratoga Springs	13,900	7	1	1	07	0		
Schenectady	92,800	6	3	8	09	4	0.04	50.0
Troy	72,200	7	1	1	01	0		
Watertown	32,800	7	2	4	12	0		
White Plains	27,400	7	1	8	29	2	07	25.0
North Carolina								
Asheville	31,500	7	1	10	32			
Charlotte	53,300	5	0	8	15	0		
Raleigh	30,400	7	0	1	03	1	03	100.0
Rocky Mount	15,100	5	0	1	07	0		
Winston-Salem	69,000	6	1	2	03	0		
North Dakota								
Fargo	24,900	5	1	10	40	3	12	30.0
Ohio								
Bellefontaine				1		0		
Cambridge	14,000	5	2	1	07	0		
Cleveland Heights	22,200	3	0	1	05	0		
East Cleveland	37,000	7	1	2	05	0		
Elyria	23,800	7	0	3	13	0		
Kenmore	19,400	4	1	1	05	0		
Lorain	42,300	7	1	3	07	0		
Mansfield	31,800	7	0	1	03	0		
Marietta	15,300	1	2	2	13	1	07	50.0
Salem	11,100	4	0	1	09	0		
Sandusky	24,500	6	0	2	08	0		
Springfield	68,700	7	1	2	03	0		
Steubenville	32,000	7	1	2	06	0		
Oklahoma								
Okmulgee	25,300	1	0	3	12	2	08	66.7
Pennsylvania								
Allentown	92,200	2	2	1	01	0		
Altoona	66,100	7	2	1	02	0		
Braddock	21,700	7	0	3	14	0		
Butler	25,200	5	2	1	04	0		
Carbondale	19,500	7	0	1	05			
Carrick	13,000	5	0	1	08			
Harrisburg	83,400	7	1			2	02	
Lansford		4	0	1		1		100.0
New Castle	49,800	6	1	3	06	0		
North Braddock	16,700	7	0	1	06	0		
Oil City	23,300	7	1	2	09			
Swissvale	12,900	4	0	1	08	0		
Washington	23,000	7	0	7	30			
West Chester		7	1	1		0		
Wilkinsburg	27,400	3	1	3	11	1	04	33.3
Windber				1		1		100.0
Rhode Island								
Cranston	34,500	7	2	2	06	0		
Newport	27,800	7	1	1	.04	0		
Pawtucket	69,800	6	1	1	.01	0		
Woonsocket	49,700					1	02	
South Carolina								
Charleston	73,100	1	1	8	11	0		
Florence	13,200	1	0	1	08	0		
Greenville	27,300	6	0	1	04	0		
Spartanburg	25,500	4	0	6	24	0		
Sumter		2	0	2		0		
South Dakota								
Sioux Falls	30,100	7	1	1	.03	0		
Tennessee								
Knoxville	95,500	7	0			1	.01	
Texas:								
Galveston	48,400	7	0	2	.04	1	02	50.0
Utah								
Odgen	36,900	5	0	2	.05	0		

Reported Prevalence for the Year 1925—Continued

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Vermont								
Barre		5	0	1		0		
Bennington		2	1	1		1		100 0
Burlington	24,100	6	1	1	0 04	0		
Virginia								
Charlottesville	11,200	3	0	1	09	0		
Lynchburg	30,400	5	1	1	03	0		
Petersburg	35,700	7	1	3	.08	2	0 06	66 7
Portsmouth	59,000	7	1	5	.08	0		
Roanoke	58,200	6	1	2	03	0		
Washington								
Aberdeen	16,200	6	1	1	06	1	.06	100 0
West Virginia								
Bluefield	19,300	3	2			1	05	
Wisconsin								
Eau Claire	22,400	7	1	6	.27	0		
Janesville	20,800	6	1	3	14	2	10	66 7
Kenosha	50,900	7	1	1	02	0		
La Crosse	30,400	7	1	21	69	[1] 7	23	33.3
Madison	46,400	7	2	2	04			
Racine	67,700	6	2	3	.04	2	.03	66 7
Sheboygan	33,500	6	1	2	06	0		
Waukesha	14,700	1	1	1	07	0		
Wausau	20,100	7	1	3	15	1	05	33 3

[1] Includes nonresidents.

RABIES IN MAN

City	Deaths registered, 1925	City	Deaths registered, 1925
Arizona:		Mississippi	
Tucson	2	Jackson	1
Georgia		Montana	
Macon	1	Great Falls	1
Illinois		New Jersey:	
Springfield	1	Bridgeton	1
Kansas		Irvington	1
Pittsburg	1	North Carolina	
Kentucky		Raleigh	1
Newport	1	Ohio	
Massachusetts		Ironton	1
Arlington	1	Springfield	1
Holyoke	1		

RABIES IN ANIMALS

City	Cases reported, 1925	City	Cases reported, 1925
Alabama		California—Continued	
Dothan	8	Long Beach	3
Florence	6	Pomona	10
Mobile	14	Riverside	1
Tuscaloosa	2	Santa Barbara	7
Arkansas		Connecticut	
Little Rock	38	Greenwich	18
California:		Stamford	2
Alhambra	2	Florida	
Berkeley	10	St Petersburg	12
Eureka	3	Georgia	
Fresno	6	Albany	4
Glendale	4	Savannah	10

Reported Prevalence for the Year 1925—Continued

RABIES IN ANIMALS—Continued

City	Cases reported, 1925
Illinois	
Decatur	1
Iowa	
Burlington	1
Ottumwa	4
Kansas	
Coffeyville	8
Emporia	15
Fort Scott	4
Topeka	1
Massachusetts	
Arlington	3
Belmont	2
Brookline	1
Clinton	2
Framingham	1
Milton	1
Northbridge	1
Watertown	9
Winchester	2
Michigan:	
Hamtramck	4
Highland Park	2
Marquette	4
Pontiac	13
Mississippi	
Jackson	7
Laurel	5
Missouri	
Joplin	6
Moberly	6
Springfield	10
New Hampshire	
Manchester	1
New Jersey	
Bayonne	7
Bloomfield	10
Bridgeton	1
Clifton	4
East Orange	7
Englewood	3
Irvington	1
Kearny	6
Lodi	1
Montclair	7
Morristown	1
Orange	2
Passaic	3
New Jersey—Continued	
Phillipsburg	2
Rahway	1
Rutherford	2
West New York	1
West Orange	4
New Mexico	
Albuquerque	6
New York	
Mount Vernon	5
White Plains	3
North Carolina	
Greensboro	14
New Bern	17
Winston-Salem	19
Ohio	
Barberton	3
Cambridge	1
Chillicothe	15
Cleveland Heights	3
Conneaut	2
Hamilton	2
Lancaster	3
Middletown	3
Niles	1
Norwood	15
Sandusky	12
Springfield	13
Oklahoma	
Sapulpa	1
South Carolina	
Anderson	9
Florence	7
Greenville	2
Texas	
Beaumont	3
Cleburne	6
Eastland	25
Palestine	21
Texarkana	20
Virginia	
Alexandria	12
Newport News	8
Washington	
Yakima	7
Wisconsin	
Marinette	11

ROCKY MOUNTAIN SPOTTED FEVER

City	Cases reported, 1925	Deaths registered, 1925
Idaho:		
Pocatello	5	1
Kansas		
Topeka	1	0
Montana:		
Butte	1	0
Missoula	7	6
Utah.		
Ogden	1	0

Reported Prevalence for the Year 1925—Continued

SCARLET FEVER

City	Estimated population July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Alabama								
Anniston	20,500	7	8	15	0 73	0		
Dothan	14,500	2	8	9	62	0		
Florence	12,700	1	7	1	08	0		
Mobile	66,000	7	25	25	38	0		
Montgomery	46,500	5	32	26	.56	0		
Selma	17,000					1	0 06	
Tuscaloosa	13,100			10	76	0		
Arizona								
Phoenix	38,700	2	38	66	1.71	0		
Tucson	26,700	5	6	58	2.17	0		
Arkansas								
Hot Springs		3	3	2				
Little Rock	71,200	7	72	44	59	0		
California								
Alameda	31,900	7	44	42	1 32	0		
Alhambra		2	33	28		0		
Bakersfield	23,500	7	25	39	1 66	1	04	2 6
Berkeley	66,200	4	69	37	56	0		
Chico		2	16	7		0		
Eureka	13,500	5	38	2	15	0		
Fresno	58,500	5	83	40	68	0		
Glendale	21,300	4	41	40	1 88	0		
Long Beach	91,200	7	63	322	3 53	2	02	6
Modesto		2	20	8		0		
Pasadena	56,700	7	93	28	49	0		
Pomona	15,400	5	30	50	3 25	0		
Richmond	22,500	5	35	11	49	0		
Riverside		7	20	41		0		
Sacramento	72,300	7	76	52	.72	0		
San Bernardino	22,800	7	14	26	1 14	0		
San Jose	43,600	5	51	170	3 90	3	07	1 8
Santa Ana	19,500	5	24	64	3 28	0		
Santa Barbara	24,000	5	6	60	2 50	0		
Stockton	47,300	4	87	159	3.36	1	02	.6
Colorado								
Boulder	11,800	6	15	5	42	0		
Colorado Springs		7	51	104		3		2.9
Greeley	12,500	2	15	27	2 16	1	08	3 7
Pueblo	43,800	4	98	55	1 26	0		
Trinidad	11,000	7	30	12	1 09	0		
Connecticut								
Danbury		4	21	22		0		
Fairfield	14,500	4	51	39	2.69	0		
Greenwich	25,300	7	46	70	2.77	0		
Manchester	21,000	6	48	115	5.48			
Meriden	36 300	3	32	84	2 31			
Milford	13,500	5	21	21	1 56	0		
New Britain	68 000	7	118	351	5.16	3	04	9
New London	29,100	7	46	48	1 65	1	03	2.1
Norwich	23,100	7	29	41	1.77	0		
Shelton		1	101	169		6		3 6
Stamford	40,700	2	35	172	4.23	5	12	2.9
Stratford	16,100	4	51	48	2.98	1	06	2.1
Florida								
St Petersburg	26,800	2	55	22	82	0		
Tampa	94,700	4	12			2	.02	
West Palm Beach		2	1	9		0		
Georgia:								
Albany	13,500	4	7	2	15	0		
Augusta	55,200	5	34	12	22	0		
Brunswick	16,800	6	3	1	06	0		
Lagrange	23,500	2	11	22	94	0		
Macon	58,200	7	21	7	12	0		
Rome	13,900	5	21	12	86	0		
Savannah	93,100	6	43	24	.26	[1]1	01	4.2
Idaho:								
Boise	23,000	6	46	53	2.30			
Pocatello	18,300	7	9	1	.05	0		

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

SCARLET FEVER—Continued

City	Estimated population July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Illinois								
Alton	28,800	6	50	121	4.51	2	0.07	1.7
Aurora	40,300	6	68	87	2.16	1	.02	1.1
Berwyn	18,900	3	40	120	6.35	0	----	----
Bloomington	30,100	5	95	60	1.97	1	.03	1.7
Blue Island	13,200	5	16	59	4.47	1	.08	1.7
Centralia	14,100	6	12	15	1.06	----	----	----
Champaign	18,200	7	38	23	1.26	0	----	----
Chicago Heights	22,100	4	29	13	.59	0	----	----
Cicero	62,200	7	61	225	3.62	0	----	----
Danville	37,000	6	47	48	1.30	2	.05	4.2
Decatur	53,900	3	40	135	2.50	2	.04	1.5
East Moline	----	2	9	10	----	0	----	----
East St. Louis	71,400	6	63	114	1.60	2	.03	1.8
Elgin	33,400	7	36	336	10.06	1	.03	.3
Evanston	43,600	7	80	274	6.24	1	.02	.4
Freeport	20,700	5	46	119	5.75	0	----	----
Galesburg	24,800	7	21	64	2.58	0	----	----
Jacksonville	15,900	7	37	55	3.46	0	----	----
Joliet	40,600	2	70	67	1.65	0	----	----
Kewanee	19,700	3	46	14	.71	0	----	----
La Salle	13,900	6	13	4	.29	0	----	----
Maywood	14,200	7	40	44	3.10	0	----	----
Moline	33,900	7	23	75	2.21	0	----	----
Murphysboro	12,500	3	20	48	3.84	1	.08	2.1
Oak Park	51,400	7	72	173	3.37	0	----	----
Ottawa	11,700	5	27	42	3.65	1	.09	2.4
Pekin	13,300	7	29	24	1.80	0	----	----
Peoria	81,600	7	203	350	4.29	1	.01	.3
Quincy	----	7	47	43	----	0	----	----
Rock Island	40,000	7	28	20	.50	1	.02	5.0
Rockford	76,500	4	73	64	.84	1	.01	1.6
Springfield	63,900	4	58	125	1.97	2	.03	1.6
Streator	15,100	3	43	22	1.46	0	----	----
Waukegan	22,000	4	52	35	1.59	----	----	----
Indiana								
Anderson	33,900	6	47	14	.41	0	----	----
Bloomington	12,600	3	15	8	.63	0	----	----
Connersville	12,500	1	37	26	2.08	0	----	----
Crawfordsville	10,500	6	36	38	3.62	1	.10	2.6
East Chicago	45,600	7	31	29	.64	2	.04	6.9
Elkhart	27,100	5	59	103	3.80	----	----	----
Elwood	----	6	6	1	----	0	----	----
Fort Wayne	97,800	7	146	195	1.99	4	.04	2.1
Frankfort	13,100	7	26	25	1.91	0	----	----
Gary	76,900	5	81	121	1.57	10	.13	8.3
Hammond	50,400	6	96	51	1.01	1	.02	2.0
Huntington	15,900	5	42	164	10.31	4	.25	2.4
Kokomo	36,900	7	42	16	.43	0	----	----
La Fayette	23,800	7	45	57	2.39	0	----	----
Logansport	23,100	7	29	112	4.85	1	.04	.9
Michigan City	20,300	3	56	20	.99	2	.10	10.0
Mishawaka	16,700	5	50	300	17.96	2	.12	.7
Muncie	42,500	7	25	140	3.29	0	----	----
New Albany	----	4	5	19	----	0	----	----
Newcastle	17,000	7	13	10	.59	0	----	----
Peru	12,700	2	12	19	1.50	0	----	----
Richmond	30,500	7	22	32	1.70	0	----	----
South Bend	80,100	6	159	310	3.87	2	.02	.6
Terre Haute	71,100	6	102	248	3.49	2	.03	.8
Whiting	12,200	4	9	7	.57	0	----	----
Iowa								
Boone	12,800	4	28	37	2.89	0	----	----
Burlington	26,400	7	47	187	7.08	0	----	----
Cedar Rapids	50,600	5	55	51	1.01	1	.02	2.0
Clinton	26,400	6	29	37	1.40	0	----	----
Council Bluffs	39,800	5	68	43	1.08	0	----	----
Dubuque	41,000	6	44	38	.93	1	.02	2.6
Fort Dodge	21,700	4	22	3	.14	0	----	----
Iowa City	15,300	3	19	9	.59	----	----	----
Marshalltown	16,900	3	26	11	.65	----	----	----
Mason City	22,700	7	48	27	1.19	0	----	----
Muscatine	16,800	6	29	41	2.44	0	----	----
Waterloo	36,800	4	73	66	1.79	0	----	----

Reported Prevalence for the Year 1925—Continued

SCARLET FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Kansas								
Arkansas City	14,000			14	1 00	0		
Coffeyville	16,200	6	16	18	1 11	0		
Emporia	12,200	2	40	53	4 34	1	0 08	1 9
Fort Scott	11,800	7	7	15	1 27	0		
Hutchinson	26,000	5	72	21	81			
Lawrence	12,300	7	30	27	2 20	0		
Leavenworth	20,900	7	18	14	67			
Parsons	14,800	4	21	6	41	1	07	16 7
Pittsburg	19,200	6	26	28	1 46	1	05	3 6
Topeka	55,400	6	139	118	2 13	0		
Wichita	88,400	7	110	91	1 03	0		
Kentucky:								
Covington	58,300	5	95	70	1 20	1	02	1 4
Henderson	12,600	3	16	8	63	0		
Newport		5	49	25		0		
Paducah	25,900	7	32	53	2.05	0		
Louisiana:								
Baton Rouge	27,800	5	13	9	32	0		
Lake Charles		3	5	2		1		50 0
Shreveport	57,900	3	18	36	62	0		
Maine.								
Auburn	18,100	4	32	33	1 82	0		
Bangor	26,600	5	15	26	98	1	04	3 8
Bath	17,800	5	15	18	1 01	1	06	5 6
Biddeford	18,500	5	9	14	76	0		
Lewiston	34,900	6	96	51	1 46	0		
Portland	75,300	7	131	203	2 70	4	05	2 0
Sanford	11,600	6	14	14	1 21	1	.09	7 1
South Portland		1	6	15				
Waterville	14,400	7	14	13	90	0		
Westbrook				60		0		
Massachusetts.								
Adams	13,500	7	11	10	74	0		
Amesbury	11,200	4	20	40	3 57	0		
Arlington	24,900	7	47	46	1 85	0		
Athol		1	37	7		1		14 3
Attleboro	20,600	7	35	40	1 94	1	05	2 5
Belmont	15,300	5	34	24	1 57	1	07	4 2
Beverly	22,700	7	42	107	4 71	2	09	7 1
Braintree	13,200	5	37	18	1 36	0		
Brockton	65,300	7	148	69	1 06	1	.02	1 4
Brookline	42,700	7	65	54	1 26	0		
Chelsea	47,200	7	105	105	2.22	0		
Chicopee	41,900	7	42	66	1 58	1	02	1 5
Clinton	14,200	7	26	108	7 61	0		
Danvers	11,800	7	22	59	5 00	0		
Dedham	13,900	5	35	28	2 01	0		
Easthampton	11,600	6	15	13	1 12	0		
Everett	42,100	7	110	184	4 37	2	.05	1.1
Framingham	21,100	7	45	141	6 68	0		
Gardner	18,700	7	32	26	1.39	0		
Gloucester	23,400			35	1 50	0		
Greenfield	15,200	7	35	77	5 07	0		
Haverhill	49,200	4	68	123	2.50	2	04	1.6
Holyoke	60,300	7	59	52	.86	0		
Lawrence	93,500	5	84	173	1 85	5	.05	2 9
Leominster	22,100	7	48	18	81	0		
Malden	51,800	7	158	159	3.07	2	04	1 3
Marlboro	16,200	6	18	53	3 27	0		
Medford	47,600	7	105	153	3 21	0		
Melrose	20,200	7	43	57	2.82	2	10	3.5
Methuen	20,600	6	55	89	4 32	2	10	2 2
Milford	14,800	3	29	42	2.84	2	14	4 8
Milton		1	34	23		0		
Newburyport	15,700	7	14	78	4 97	0		
Newton	53,000	7	117	104	1 96	0		
North Adams	22,700	7	13	12	.53	0		
Northampton	24,100	7	42	91	3.78	0		
Northbridge	10,100	7	11	7	.69	0		
Palmer		2	3	37		0		
Peabody	19,900	7	52	58	2.91	0		

Reported Prevalence for the Year 1925—Continued

SCARLET FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Massachusetts—Continued.								
Pittsfield	46,900	7	114	89	1.90	2	0.04	2.2
Plymouth	13,200	5	19	17	1.29	0		
Quincy	60,100	7	141	129	2.15	0		
Revere	33,300	1	77	112	3.36	1	.03	.9
Salem	42,800	7	91	130	3.04	0		
Saugus	12,700	6	44	22	1.73	0		
Somerville	9[illegible],000	7	204	220	2.28	3	.03	1.3
Southbridge	15,500	7	13	1	.06	0		
Taunton	39,300	5	45	53	1.35	1	.03	2.0
Wakefield	15,600	5	48	51	3.27	0		
Waltham	34,700	7	70	122	3.52	0		
Watertown	25,500	7	31	62	2.43	0		
West Springfield	15,300	5	31	79	5.16			
Westfield	19,300	7	42	14	.73	0		
Winchester	11,600	7	21	16	1.38	0		
Winthrop	16,200	7	41	24	1.48	0		
Woburn	18,400	7	33	13	.71	0		
Michigan								
Adrian	12,500	3	8	160	12.80	1	.08	.6
Ann Arbor	22,200	7	41	92	4.14	1	.05	1.1
Battle Creek	42,300	7	222	73	1.73	1	.02	1.4
Bay City	48,900	7	109	137	2.80	4	.08	2.9
Benton Harbor	14,000	7	37	10	.71	0		
Cadillac		3	10	26		0		
Hamtramck	81,700	5	38	20	.24	0		
Highland Park	72,300	7	169	137	1.89	2	.03	1.5
Holland	13,100	6	48	32	2.44	0		
Ironwood	17,400	7	99	78	4.48	0		
Ishpeming		5	25	12		0		
Jackson	58,000	4	151	183	3.16	3	.05	1.6
Kalamazoo	53,600	7	265	68	1.27	0		
Lansing	70,800	6	140	267	3.77	3	.04	1.1
Marquette	13,400	6	37	17	1.27	0		
Muskegon	43,100	6	90	109	2.53	0		
Muskegon Heights		2	89	28		0		
Pontiac	47,500	7	175	349	7.35	2	.04	.6
Port Huron	30,000	6	65	217	7.23	7	.23	3.2
River Rouge		2	40	41		2		4.9
Saginaw	72,100	5	212	68	.94	1	.01	1.5
Sault Ste. Marie		7	27	30		2		6.7
Minnesota								
Albert Lea		1	24	3		0		
Austin	11,900	5	35	34	2.86			
Brainerd		1	14	16		0		
Faribault	12,300	4	33	20	1.63	0		
Hibbing	18,000	6	80	61	3.39	0		
Mankato	13,700	6	23	58	4.23	2	.15	3.4
Rochester	17,000	3	20	28	1.65	1	.06	3.6
St. Cloud	18,900	3	37	14	.74	1	.05	7.1
Virginia	16,000	1	230	66	4.12	1	.06	1.5
Winona	19,500	5	25	48	2.46			
Mississippi								
Biloxi	12,600	4	2	3	.24	0		
Jackson	23,700	2	14	23	.97	1	.04	4.3
Laurel	15,700			5	.32			
Meridian	24,300	1	47	3	.12			
Natchez	13,100			3	.23	0		
Missouri								
Independence	12,700	2	99	40	3.15	2	.16	5.0
Joplin		6	30	33		1		3.0
Moberly	13,900	5	39	34	2.45	0		
St. Joseph	78,300	7	109	88	1.12	0		
Springfield	42,100	5	43	141	3.35	3	.07	2.1
Montana								
Anaconda	12,500	6	27	9	.72	0		
Butte	42,900	5	39	16	.37	0		
Great Falls	29,900	4	51	258	8.63	1	.03	.4
Helena		3	64	103		1		1.0
Missoula		7	25	43		0		

Reported Prevalence for the Year 1925—Continued

SCARLET FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Nebraska								
Grand Island	15,600	7	17	17	1 09			
Lincoln	60,900	7	87	62	1 02	1	0 02	1 6
North Platte	13,700	3	26	17	1 24	0		
Nevada								
Reno	12,700	7	15	17	1 34	1	08	5 9
New Hampshire								
Berlin	18 600	5	22	11	.59	0		
Claremont		2	7	36		0		
Concord	22,500	7	38	63	2.80	0		
Dover		7	6	27		0		
Keene	11,900	6	27	23	1 93	0		
Manchester	83,100	6	70	500	6 02	6	07	1 2
Nashua	29,700	4	44	72	2.42	0		
Portsmouth	14,900	7	14	22	1 48			
New Jersey								
Asbury Park	13,700	7	15	16	1 17	2	15	12.5
Bayonne	88,800	6	78	149	1 68	1	01	7
Belleville	18,900	7	42	38	2.01	0		
Bloomfield	26,000	5	60	68	2.62	0		
Bridgeton	14,400	6	18	39	2.71	1	07	2 6
Carteret	14,000	2	23	4	.29	0		
Clifton	34,700	3	40	152	4 38	2	06	1 3
Collingswood		1	54	25				
Dover		2	12	26		0		
East Orange	60 000	7	104	206	3 43	1	02	5
Englewood	12,600	7	32	34	2 70	0		
Garfield	24 600	3	27	59	2 40	0		
Gloucester City	13 700	3	4	22	1 61	0		
Hackensack	19,700	6	39	28	1 42	0		
Harrison	16,400	6	33	66	4 02			
Hoboken		4	59	37		0		
Irvington	33,200	5	92	122	3 67	0		
Kearny	31,300	7	81	209	6 68	0		
Lodi		1	7	5		0		
Long Branch	13,600	7	32	10	74	0		
Montclair	32,900	6	58	41	1 25	0		
Morristown	12 600	7	25	25	1 98	0		
New Brunswick	38,000	7	40	28	74	0		
Nutley				51		0		
Orange	35 400	4	53	58	1 64	0		
Passaic	69,000	5	79	171	2.48	4	05	2 3
Perth Amboy	47 100	7	87	40	85	0		
Phillipsburg	18 600	4	22	25	1 34			
Plainfield	31 700	5	56	85	2 68	1	03	1 2
Rahway	12,000	7	29	36	3.00	0		
Red Bank		1	10	11		1		9 1
Ridgefield Park		2	34	29				
Rutherford		2	33	60		0		
Summit	11,700	5	19	57	4.87	0		
Union City	63,100			50	79			
West New York	39,200	7	36	100	2 55	1	03	1.0
West Orange	18,200	7	43	65	3 57	0		
New Mexico								
Albuquerque	21,000	2	23	67	3 19	0		
New York								
Amsterdam	35,300	2	43	122	3 46	0		
Binghamton	71,900	5	123	249	3 46	2	03	8
Cohoes	23,000	7	27	60	2 61	0		
Corning	15,700	6	8	7	45	0		
Cortland	13,900	7	36	5	36	0		
Dunkirk	19,900	6	62	75	3.77	0		
Elmira	48,400	5	46	53	1 10	1	.02	1.9
Freeport		1	10	31				
Geneva	15,900	6	25	8	50	0		
Glens Falls	17,900	7	5	45	2.51	0		
Gloversville	22,100	7	10	27	1 22	0		
Hornell	15,800	6	13	5	.32	0		
Hudson	11,800	5	12	8	.68	0		
Ilion	10,400	2	7	10	.96	0		
Ithaca	18,900	7	48	41	2.17	0		
Jamestown	43,400	7	110	152	3.50	1	.02	.7

Reported Prevalence for the Year 1925—Continued

SCARLET FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
New York—Continued								
Johnson City		1	102	34		0		
Johnstown	10,700	4	2	27	2.52	0		
Kingston	28,100	6	24	97	3.45	1	0.04	1.0
Lackawanna	20,200	7	51	15	.74	0		
Little Falls	12,400	7	17	8	.65	0		
Lockport	21,700	5	70	41	1.89	0		
Middletown	20,400	7	30	34	1.67	0		
Mount Vernon	50,400	7	37	161	3.19	0		
New Rochelle	44,200	6	73	50	1.13	1	.02	2.0
Newburgh	30,100	7	41	207	6.81	0		
Niagara Falls	57,000	4	104	141	2.47	1	.02	.7
North Tonawanda	17,400	7	90	73	4.20	1	.06	1.4
Olean	21,300	5	35	80	3.76	3	.14	3.7
Peekskill	18,000	6	30	31	1.72	0		
Poughkeepsie	35,700	7	54	17	.48	1	.03	5.9
Rensselaer	11,400	3	21	13	1.14	0		
Rome	30,300	4	38	149	4.92	0		
Salamanca		1	47	8		0		
Saratoga Springs	13,900	7	14	74	5.32	1	.07	1.4
Schenectady	92,800	7	204	93	1.00	1	.01	1.1
Troy	72,200	7	50	90	1.25	1	.01	1.1
Watertown	32,800	5	60	66	2.01	1	.03	1.5
Watervliet	16,200	5	15	13	.80	1	.06	7.7
White Plains	27,400	6	46	35	1.28	1	.04	2.9
North Carolina:								
Asheville	31,500	7	42	39	1.24			
Charlotte	53,300	4	41	46	.86	0		
Greensboro	47,100	2	52	64	1.36	0		
High Point	23,600	1	48	69	2.92	0		
New Bern	12,200	2	2	3	.25	0		
Raleigh	30,400	7	43	38	1.25	0		
Rocky Mount	15,100	5	19	16	1.06	0		
Salisbury	17,700	3	24	21	1.19	0		
Wilmington	37,100	7	41	40	1.08	0		
Wilson	12,800	2	10	30	2.34	0		
Winston-Salem	69,000	6	57	73	1.06	0		
North Dakota:								
Fargo	24,900	3	35	139	5.58	0		
Ohio:								
Alliance	25,000	2	33	41	1.64	0		
Ashtabula	25,100	7	39	85	3.39	0		
Barberton	23,300	6	34	21	.90	0		
Bellaire	16,300	4	24	6	.37	0		
Bellefontaine				43		1		2.3
Bucyrus	11,700	5	29	32	2.74	0		
Cambridge	14,000	5	20	18	1.29	0		
Chillicothe	16,600	7	52	30	1.81	0		
Cleveland Heights	22,200	3	100	45	2.03	0		
Conneaut		2	17	111		1		.9
Coshocton	11,600	3	1	14	1.21	0		
Cuyahoga Falls	13,700	4	18	18	1.31	1	.07	5.6
East Cleveland	37,600	7	42	86	2.29	0		
East Liverpool	22,000	3	46	44	2.00	0		
East Youngstown (Campbell)	16,000	5	19	46	2.87	1	.06	2.2
Elyria	23,800	7	36	19	.80	0		
Findlay	18,200	7	18	30	1.65	1	.05	3.3
Fostoria		3	19	8		0		
Fremont	13,900	7	25	23	1.65	0		
Hamilton	42,400	5	41	33	.78	4	.09	12.1
Ironton	14,500	2	12	58	4.00	0		
Kenmore	19,400	4	40	57	2.94	2	.10	3.5
Lakewood	56,800	4	47	67	1.18	0		
Lancaster	16,100	3	13	19	1.18	0		
Lima	46,700	7	75	105	2.25	0		
Lorain	42,300	5	91	145	3.13	1	.02	.7
Mansfield	31,800	7	16	160	5.03	2	.06	1.2
Marietta	15,300	3	9	11	.72	0		
Marion	32,500	4	35	8	.25	0		
Martins Ferry	15,500	6	28	27	1.74	1	.06	3.7
Middletown	30,800	7	29	36	1.17	0		

Reported Prevalence for the Year 1925—Continued

SCARLET FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Ohio—Continued								
Newark	30 500	7	53	63	2 07	0		
Niles	16,600	5	39	89	5 36			
Norwood	29,900	7	31	39	1 30	0		
Piqua	16,000	7	10	33	2 06			
Salem	11,100	5	63	20	1 80	0		
Sandusky	24,500	7	23	200	8 16	0		
Springfield	68,700	5	92	316	4.60			
Steubenville	32,000	7	35	15	47	0		
Zanesville	30,400	7	39	144	4 74	0		
Oklahoma								
Ardmore	17,200	1	5	35	2 03	5	0 29	14 3
Okmulgee	25,300	1	35	54	2 13	0		
Sapulpa	14,200	1	9	12	.85	0		
Oregon								
Astoria	16,500	7	8	3	18	0		
Eugene	11,400	7	28			21	1 84	
Pennsylvania								
Allentown	92 200	4	180	34	37	0		
Altoona	66,100	7	62	40	61	1	02	2 5
Beaver Falls	13,100	3	40	13	99			
Braddock	21,700	7	32	35	1 61	0		
Bradford	15,800	6	20	27	1 71	0		
Butler	25,200	7	40	87	3 45	1	04	1.1
Carbondale	19,500	7	12	5	26			
Carlisle	11,400	7	18	158	13 86			
Carnegie	12,400	3	18	34	2 74	0		
Carrick	13,000	5	27	44	3 38			
Chambersburg	13,900	7	8	52	3 74	0		
Charleroi	12,600	7	19	5	40			
Clairton	14,900	2	39	55	3 69	0		
Coatesville	16,500	6	25	11	67	0		
Columbia				15				
Connellsville	14,200	6	54	94	6 57	0		
Dubois	14,300	3	28	21	1 47	0		
Duquesne	20,900	3	28	70	3 35	3	14	4.3
Easton	36 800	6	26	19	.52	1	03	5 3
Farrell	18,700	3	35	54	2 89	1	05	1 9
Greensburg	16 100	1	32	76	4 72	0		
Harrisburg	83,400	7	124	426	5 11	2	02	5
Hazleton	36,100	7	27	6	17	0		
Homestead	21,400	7	27	113	5 28	1	05	9
Jeannette	11,700	5	23	43	3 68	2	.17	4.7
Kingston	18,000	2	21	23	1 28	0		
Lancaster	56,500	4	106	59	1 04	2	.04	3 4
Lansford		5	2	1		0		
Latrobe				32				
Lewistown		3	28	122		1		.8
McKees Rocks	18,100	3	28	7	39	0		
McKeesport	49,100	7	29	82	1 67	1	02	1 2
Meadville	15,600	3	11	40	2.56			
Monessen	21,200	6	33	18	.85	0		
Mount Carmel		3	4	1		0		
Nanticoke	24,700	6	22	14	57	0		
New Castle	49,800	6	97	219	4.40	3	06	1.4
Norristown	34,800	7	36	8	23	0		
North Braddock	16,700	7	27	26	1 56	0		
Oil City	23,300	5	38	59	2 53			
Olyphant	11,200	6	4	7	62	1	.09	14.3
Phoenixville		4	7	3				
Pittston	19,800	7	7	10	.51			
Plymouth		6	11	9		1		11.1
Pottstown	18,500	2	8	8	43	0		
Sharon	25,000	5	41	146	5 84	0		
Steelton		7	20	37		0		
Sunbury	16,800	7	25	85	5 06	1	.06	1.2
Swissvale	12,900	4	58	73	5 66	0		
Uniontown		5	63	49		0		
Vandergrift		1	27	27		1		3.7
Warren	15,100	7	32	33	2.19	0		
Washington	23,000	7	54	60	2.61			
Waynesboro				29				

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Reported Prevalence for the Year 1925—Continued

SCARLET FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Pennsylvania—Continued.								
West Chester		7	17	43				
Wilkes-Barre	77,600			74	0.95			
Wilkinsburg	27,400	3	46	89	3.25			
Windber		1	16	3		0		
Woodlawn	18,900	5	17	45	2.38	1	0.05	2.2
York	49,100	3	61	65	1.32	2	.04	3.1
Rhode Island								
Central Falls	25,400	4	17	18	.71			
Cranston	34,500	7	38	52	1.51	0		
Newport	27,800	6	69	33	1.19	1	.04	3.0
Pawtucket	69,800	4	52	75	1.07	0		
Woonsocket	49,700	1	38	36	.72	1	.02	2.8
South Carolina								
Anderson	11,100	4	7	6	.54	0		
Charleston	73,100	1	41	22	.30	0		
Florence	13,200	1	14	3	.23	0		
Greenville	27,300	6	23	9	.33	1	.04	11.1
Spartanburg	25,500	4	25	9	.35	0		
Sumter		2	6	3		0		
South Dakota								
Aberdeen	15,000	2	74	45	3.00			
Sioux Falls	30,100	5	65	178	5.91	1	.03	.6
Tennessee								
Chattanooga	66,600	4	53	116	1.74			
Knoxville	95,500	4	75	118	1.24	3	.03	2.5
Texas								
Amarillo	17,800	6	41	51	2.87	1	.06	2.0
Beaumont	50,600	5	3	19	.38	0		
Cleburne	14,200	5	1	4	.28	0		
Eastland		1	5	10		0		
Galveston	48,400	7	10	8	.17	0		
Greenville	14,400	1	5	16	1.11	0		
Orange				8		0		
Palestine	11,400			4	.35			
Texarkana	12,400	6	10	9	.73	0		
Tyler	13,000	7	6	3	.23	0		
Waco	43,900	6	21	19	.43	0		
Utah								
Ogden	36,900	7	19	29	.79	0		
Provo	11,200	2	10	2	.18	0		
Vermont								
Barre		6	23	34		0		
Bennington		2	9	15		0		
Burlington	24,100	5	30	32	1.33	0		
Rutland	15,800	4	11	19	1.20	0		
Virginia								
Alexandria	18,500	6	15	24	1.30	0		
Charlottesville	11,200	4	6	21	1.87	0		
Danville	23,000	7	30	24	1.04			
Lynchburg	30,400	6	33	75	2.47	1	.03	1.3
Newport News	47,100	6	30	21	.45	0		
Petersburg	35,700	7	30	16	.45	0		
Portsmouth	59,000	7	27	47	.80	0		
Roanoke	58,200	6	85	65	1.12	1	.02	1.5
Suffolk				4		0		
Washington								
Aberdeen	16,200	6	9	13	.80	0		
Bremerton		2	17	19		0		
Everett	29,300	7	18	2	.07			
Hoquiam	11,100			3	.27	0		
Vancouver	14,500	6	23	35	2.41	0		
Walla Walla		3	2	6		0		
Yakima	22,700	7	23	31	1.37	0		
West Virginia								
Bluefield	19,300	4	56	91	4.72	0		
Charleston	49,000	7	60	41	.84	0		
Clarksburg	30,400	3	66	23	.76	0		
Fairmount	21,000	5	35	36	1.71			
Huntington	63,500	3	36	96	1.51			
Martinsburg	13,500	5	16	24	1.78	1	.07	4.2
Morgantown	13,800	2	12	12	.87	2	.14	16.7
Parkersburg	21,300	5	21	52	2.44	1	.05	1.9
Wheeling		5	85	159		0		

Reported Prevalence for the Year 1925—Continued

SCARLET FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Wisconsin								
Appleton	21,100	5	47	46	2.18	0		
Ashland		6	11	56				
Beloit	24,800	5	71	92	3.71	0		
Eau Claire	22,400	6	60	96	4.29	0		
Fond du Lac	26,000	4	32	40	1.54	0		
Green Bay	34,300	5	53	55	1.60	2	0.06	3.6
Janesville	20,800	6	45	35	1.68	1	.05	2.9
Kenosha	50,900	5	81	134	2.63	1	.02	.7
La Crosse	30,400	7	72	24	.79	0		
Madison	46,400	7	133	151	3.25			
Manitowoc	22,100	3	37	24	1.09	0		
Marinette		7	39	18		0		
Oshkosh	33,200	7	37	111	3.34	2	.06	1.8
Racine	67,700	6	405	104	1.54			
Sheboygan	33,500	6	87	166	4.96	4	.12	2.4
Superior		6	103	388		3		.8
Waukesha	14,700	1	101	37	3.52	0		
Wausau	20,100	7	38	211	10.50	1	.05	.5
West Allis	18,400	5	27	46	2.50	0		
Wyoming								
Cheyenne	15,500			14	.90	0		

SEPTIC SORE THROAT

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama:						
Tuscaloosa	13,100	15	1.15	0		
California						
Santa Ana	19,500	1	.05	1	.05	1.0
Colorado						
Colorado Springs		2		0		
Connecticut						
Danbury		2		0		
Fairfield	14,500	3	.21	1	.07	3.0
Manchester	21,000	1	.05			
Norwich	23,100	2	.09	0		
Stratford	16,100	1	.06	0		
Georgia						
Lagrange	23,500	3	.13	0		
Illinois						
Aurora	40,300	3	.07	0		
Danville	37,000	20	.54	0		
Quincy		1		1		1.0
Indiana						
Jeffersonville		3				
Kansas						
Lawrence	12,300	1	.08	0		
Kentucky						
Henderson	12,600	1	.08	0		
Paducah	25,900	1	.04	0		
Maine						
Auburn	18,100	5	.28	0		
South Portland		15				
Waterville	14,400	2	.14	0		
Massachusetts						
Belmont	15,300	1	.07	0		
Beverly	22,700	3	.13	0		
Dedham	13,900	1	.07	0		
Framingham	21,100	2	.09	0		
Haverhill	49,200	2	.04	0		
Lawrence	93,500	1	.01	1	.01	1.0
Medford	47,600	2	.04	0		

Reported Prevalence for the Year 1925—Continued

SEPTIC SORE THROAT—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Massachusetts—Continued						
Peabody	19,900	2	0.10	0		
Salem	42,800			1	0.02	
Somerville	99,000	2	.02	0		
Taunton	39,300	1	.03	0		
Westfield	19,300	1	.05	0		
Winchester	11,000	1	.09	0		
Winthrop	16,200	1	.06	0		
Michigan						
Muskegon	43,100	1	.02	0		
Pontiac	47,500	405	8.53	0		
Port Huron	30,000	102	3.40	0		
Mississippi						
Biloxi	12,600	1	.08	0		
Missouri						
Springfield	42,100	1	.02	0		
Montana						
Butte	42,900	1	.02	0		
Nebraska						
Lincoln	60,900	2	.03	2	.03	1.0
New Hampshire						
Manchester	83,100	1	.01	0		
New Jersey						
Belleville	18,900	1	.05	0		
East Orange	60,000			2	.03	
Montclair	32,900	2	.06	0		
Orange	35,100	1	.03	1	.03	1.0
Passaic	69,000			1	.01	
New York						
Amsterdam	35,300	42	1.19	0		
Dunkirk	19,900	12	.60	0		
Elmira	48,400	4	.08	2	.04	2.0
Jamestown	43,400	4	.09	0		
Johnson City		1		0		
Kingston	28,100	1	.04	0		
Lackawanna	20,200	1	.05	0		
Mount Vernon	50,400	8	.16	1	.02	8.0
Newburgh	30,400	1	.03	0		
Olean	21,300	2	.09	0		
Rome	30,300	3	.10	0		
Saratoga Springs	13,900	1	.07	0		
Schenectady	92,800	3	.03	0		
Watertown	32,800			3	.09	
White Plains	27,400	3	.11	0		
North Carolina						
Greensboro	47,100	1	.02	0		
Ohio						
Fostoria		1		0		
Kenmore	19,400	7	.36	1	.05	7.0
Oklahoma						
Ardmore	17,200	5	.29	0		
Pennsylvania						
Pottstown	18,500			1	.05	
Sunbury	16,800	151	8.99			
Rhode Island:						
Cranston	34,500	1	.03	1	.03	1.0
Woonsocket	49,700			2	.04	
Virginia						
Alexandria	18,500	8	.43	0		
West Virginia						
Bluefield	19,300			2	.10	
Wisconsin:						
Marinette	13,600			1		

Reported Prevalence for the Year 1925—Continued

SMALLPOX

City	Estimated population, July 1 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Alabama								
Anniston	20, 500	5	6	77	3 76	0	-------	-------
Mobile	66 000	5	76	8	12	0	-------	-------
Montgomery	46, 500	3	3	43	92	0	-------	-------
Tuscaloosa	13, 100	-------	-------	179	13 66	2	0 15	1 1
Arizona								
Phoenix	38, 700	-------	-------	1	03	0	-------	-------
Tucson	26, 700	4	23	6	22	0	-------	-------
Arkansas								
Hot Springs	-------	3	12	1	-------	-------	-------	-------
Little Rock	74, 200	7	11	2	03	0	-------	-------
California								
Alameda	31, 900	7	8	5	.16	0	-------	-------
Alhambra	-------	2	45	8	-------	0	-------	-------
Bakersfield	23 300	5	6	2	09	0	-------	-------
Berkeley	66, 200	7	4	66	1 00	0	-------	-------
Chico	-------	2	2	2	-------	0	-------	-------
Eureka	13, 500	6	3	4	30	0	-------	-------
Fresno	58, 500	4	17	3	05	0	-------	-------
Glendale	21, 300	5	5	27	1 27	0	-------	-------
Long Beach	91, 200	3	15	119	1 30	0	-------	-------
Pasadena	56, 700	7	10	29	51	0	-------	-------
Pomona	15, 400	4	51	29	1 88	0	-------	-------
Richmond	22, 500	5	2	38	1 69	0	-------	-------
Riverside	-------	6	23	4	-------	0	-------	-------
Sacramento	72, 300	5	19	120	1 66	0	-------	-------
San Bernardino	22, 800	6	7	69	3 03	0	-------	-------
San Jose	43, 600	3	18	56	1 28	0	-------	-------
Santa Ana	19, 500	5	11	22	1 13	0	-------	-------
Santa Barbara	24, 000	4	8	17	71	0	-------	-------
Stockton	47 300	4	33	8	.17	0	-------	-------
Vallejo	26, 000	4	2	1	04	0	-------	-------
Colorado								
Pueblo	43, 800	3	1	2	05	0	-------	-------
Connecticut								
Norwich	23, 100	7	0	1	.04	0	-------	-------
Florida								
St Petersburg	26, 800	2	35	86	3 21	0	-------	-------
Tampa	94, 700	3	2	31	33	0	-------	-------
West Palm Beach	-------	2	2	1	-------	0	-------	-------
Georgia								
Albany	13, 500	4	5	1	07	0	-------	-------
Augusta	55 200	5	10	75	1 36	1	02	1, 3
Lagrange	23, 500	2	23	10	43	0	-------	-------
Macon	58 200	7	22	34	58	0	-------	-------
Rome	13, 900	5	6	2	14	0	-------	-------
Savannah	93, 100	6	20	3	03	0	-------	-------
Idaho								
Boise	23 000	4	27	46	2 00	0	-------	-------
Pocatello	18, 300	4	9	7	38	0	-------	-------
Illinois								
Alton	26, 800	4	8	137	5 11	1	04	.7
Bloomington	30, 400	-------	-------	109	3 59	1	03	9
Chicago Heights	22, 100	4	2	2	09	0	-------	-------
Danville	37, 000	6	6	6	16	0	-------	-------
Decatur	53, 900	2	2	8	15	0	-------	-------
East St. Louis	71, 400	4	20	101	1 41	1	01	1. 0
Elgin	33, 400	5	3	1	03	0	-------	-------
Evanston	43, 900	7	2	14	32	1	.02	7. 1
Freeport	20, 700	2	7	2	.10	0	-------	-------
Galesburg	24, 800	4	9	1	04	0	-------	-------
Jacksonville	15, 900	4	2	1	06	0	-------	-------
Joliet	40, 600	4	5	23	57	3	07	13 0
Maywood	14, 200	7	1	1	07	0	-------	-------
Murphysboro	12, 500	-------	-------	4	32	0	-------	-------
Peoria	81, 600	4	23	28	.34	0	-------	-------
Quincy	-------	7	14	8	-------	0	-------	-------
Rock Island	40, 000	5	22	6	.15	0	-------	-------
Rockford	76, 500	5	10	6	.08	0	-------	-------
Springfield	63 900	4	4	2	.03	0	-------	-------
Waukegan	22, 000	3	10	20	.91	0	-------	-------

Reported Prevalence for the Year 1925—Continued

SMALLPOX—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Indiana								
Anderson	33,900	4	29	19	0 56	0		
Crawfordsville	10,500	5	2	1	10	0		
Elwood		6	12	30		0		
Fort Wayne	97,800	4	59	13	13	0		
Frankfort	13,100	7	5	5	38	0		
Gary	76,900	4	44	32	42	0		
Hammond	50,400	5	34	16	32	0		
Huntington	15,900	3	8	26	1 64	0		
Jeffersonville		4	1	6		0		
Kokomo	36,900	5	14	105	2.85	0		
La Fayette	23,800	5	4	8	34	0		
Logansport	23,100	5	32	173	7 49	0		
Mishawaka	16,700	7	9	4	24	0		
Muncie	42,500	5	29	15	35	0		
New Albany		5	2	6		0		
New castle	17,000	7	7	1	06	0		
Peru	12,700			91	7 17	1	0 08	1 1
Richmond	30,500	7	17	7	23	0		
South Bend	80,100	4	27	56	70	1	01	1 8
Terre Haute	71,100	6	45	177	2 49	0		
Iowa								
Boone	12,800	4	26	37	2 89	0		
Burlington	26,400	7	20	7	27	1	04	14.3
Cedar Rapids	50,600	3	11	71	1 40	14	28	19 7
Clinton	26,400	3	16	24	91	0		
Council Bluffs	39,800	5	42	170	4 27	0		
Dubuque	41,000	4	8	2	05	0		
Iowa City	15,300	4	1	1	07			
Marshalltown	16,900	3	4	1	06			
Mason City	22,700	7	84	85	3 74	4	.18	4.7
Waterloo	36,800			124	3 37	0		
Kansas								
Arkansas City	14,000			2	14	0		
Coffeyville	16,200	6	7	12	74	0		
Emporia	12,200	2	22	3	24	1	.08	33 3
Hutchinson	26,000	2	9	4	.15			
Lawrence	12,300	7	6	5	.41	0		
Topeka	55,400	3	6	2	.04	0		
Wichita	88,400	7	253	5	.06	0		
Kentucky								
Covington	58,300	4	12	11	.19	0		
Henderson	12,600	3	0	4	32	0		
Newport		5	5	6		0		
Paducah	25,900	7	5	[1] 4	.15	0		
Louisiana								
Baton Rouge	27,800	5	7	5	.18	0		
Lake Charles				5		0		
Shreveport	57,900			33	57	2	03	6.1
Massachusetts								
Medford	47,600	7	0	1	.02	0		
Michigan								
Ann Arbor	22,200	7	15	3	.14	0		
Battle Creek	42,300	5	25	3	07	1	02	33 3
Benton Harbor	14,000	7	2	22	1 57	0		
Highland Park	72,300	5	45	3	04	0		
Jackson	58,000	4	27	2	.03	0		
Kalamazoo	53,600	7	34	39	.73	0		
Lansing	70,800	4	48	6	08	0		
Marquette	13,400	6	18	1	.07	0		
Pontiac	47,500	5	31	20	.42	3	06	15 0
Port Huron	30,000	6	5	2	.07	0		
River Rouge		2	36	4		0		
Saginaw	72,100	5	15	11	15	0		
Sault Ste. Marie		5	6	1		0		
Minnesota								
Austin	11,900	3	2	5	.42	0		
Faribault	12,300	2	5	3	.24	2	.16	66.7
Hibbing	18,000	5	6	2	11	0		

[1] Nonresidents.

Reported Prevalence for the Year 1925—Continued

SMALLPOX—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Minnesota—Continued								
Mankato	13,700	5	13	13	0 95	0		
Rochester	17,000	3	11	6	.35	1	0 06	16 7
St Cloud	18,900	3	7	6	.32	3	.16	50 0
Virginia	16,000	1	41	4	25	0		
Mississippi								
Biloxi	12,600	3	1	7	.56	0		
Jackson	23,700	2	1	4	.17	0		
Laurel	15,700			2	.13			
Meridian	24,300	1	57	61	2 51			
Natchez	13,100			22	1 68	0		
Missouri								
Independence	12,700	2	1	17	1 34	0		
Joplin		5	9	2		0		
Springfield	42,100			1	.02	0		
Montana								
Butte	42,900	4	14	10	23	0		
Great Falls	29,900	5	58	72	2 41	0		
Helena		2	11	36		0		
Missoula		6	19	4		0		
Nebraska								
Lincoln	60,900	3	14	14	23	0		
North Platte	13,700	2	2	5	36	0		
Nevada:								
Reno	12,700	7	4	36	2 83	0		
New Hampshire:								
Portsmouth	14,900	7	0	1	07			
New Jersey								
Bayonne	88,800	6	0	10	11	0		
Collingswood		1	0	2		0		
Gloucester City	13,700	3	0	7	51	0		
Kearny	31,300	7	0	1	03	0		
New Brunswick	38,000	7	0	1	03	0		
Plainfield	31,700	7	0	1	03	0		
Union City	63,100			1	02			
New York:								
Amsterdam	35,300	4	0	3	08	0		
Binghamton	71,900	7	1	1	01	0		
Dunkirk	19,900			1	05	0		
Geneva	15,900	6	0	3	19	0		
Gloversville	22,100	7	1	1	05	0		
Hudson	11,800	5	0	9	76	0		
Johnstown	10,700	4	0	30	2 80	0		
Watertown	32,800	7	1	1	03	0		
Watervliet	16,200	5	1	13	.80	0		
North Carolina								
Asheville	31,500	7	7	10	32			
Charlotte	53,300	4	25	14	26	0		
Greensboro	47,100			18	.38	0		
High Point	23,600	1	214	5	.21	0		
New Bern	12,200	2	0	2	.16	0		
Raleigh	30,400	7	12	73	2.40	0		
Salisbury	17,700	3	11	4	23	0		
Wilmington	37,100	7	5	66	1 78	0		
Wilson	12,800	2	50	2	.16	0		
Winston-Salem	69,000	3	58	239	3 46	1	01	.4
North Dakota:								
Fargo	24,900	4	16	2	08	0		
Ohio								
Alliance	25,000	2	1	8	32	5	.20	62 5
Barberton	23,300	6	3	60	2.58	0		
Bucyrus	11,700	4	9	2	17	0		
Cambridge	14,000	3	0	24	1 71	0		
Chillicothe	16,600	7	12	32	1 93	0		
Conneaut		2	1	2		0		
East Liverpool	22,000	2	1	11	50	0		
East Youngstown (Campbell)	16,000	5	11	4	25	0		
Elyria	23,800	5	4	13	55	0		
Findlay	18,200	7	5	3	16	0		
Hamilton	42,400	7	102	188	4.43	0		
Kenmore	19,400	2	1	1	.05	0		

Reported Prevalence for the Year 1925—Continued

SMALLPOX—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Ohio—Continued								
Lancaster	16,100	3	9	110	6.83	0		
Lima	46,700			3	.06	0		
Lorain	42,300	4	2	2	05	0		
Mansfield	31,800	7	5	37	1 16	0		
Marion	32,500	2	7	1	.03	0		
Martins Ferry	15,500	7	1	9	.58	0		
Middletown	30,800	5	34	23	.75	0		
Newark	30,500	5	3	18	59	0		
Niles	16,600	5	1	135	8 13	1	0 06	0 7
Norwood	29,900	7	4	3	10	0		
Piqua	16,000	4	2	2	12			
Salem	11,100	5	0	1	09	0		
Sandusky	24,500	7	12	182	7 43	0		
Springfield	68,700	3	5	8	12	0		
Steubenville	32,000	5	15	9	28	0		
Zanesville	30,400	5	17	2	07	0		
Oklahoma								
Ardmore	17,200	1	249	20	1 16	0		
Sapulpa	14,200	1	10	1	07	0		
Oregon								
Eugene	11,400	7	13	5	44	0		
Pennsylvania								
Beaver Falls	13,100	4	0	2	15			
Braddock	21,700	7	1	2	09	0		
Duquesne	20,900	4	1	1	05	1	05	100 0
Farrell	18,700	5	3	3	16	0		
Greensburg	16,100	1	0	2	12	0		
Meadville	15,600	3	4	1	06			
Sharon	25,000	5	2	3	.12	1	04	33 3
Washington	23,000	7	0	1	04			
Rhode Island								
Central Falls	25,400	4	0	43	1 69			
Pawtucket	69,800	6	0	11	16	0		
Woonsocket	49,700	1	0	28	56	0		
South Carolina								
Anderson	11,100	2	1	7	63	0		
Charleston	73,100	1	4	3	04	0		
Florence	13,200	1	14	1	.08	0		
Greenville	27,300	5	21	138	5 05	0		
Spartanburg	25,500	2	6	14	.55	0		
Sumter		2	1	7		0		
South Dakota								
Aberdeen	15,000	2	10	2	.13			
Sioux Falls	30,100	7	36	4	.13	0		
Tennessee								
Chattanooga	66,600	3	65	171	2.57			
Knoxville	95,500	5	76	4	04	0		
Texas								
Amarillo	17,800	6	8	20	1 12	0		
Beaumont	50,600	5	10	70	1 38	0		
Cleburne	14,200	3	2	10	70	0		
Galveston	48,400	7	4	49	1 01	0		
Orange		1	0	12		0		
Texarkana	12,400	6	22	4	32	0		
Tyler	13,000	6	26	110	8 46	1	08	9
Waco	43,900	6	17	12	.27	0		
Utah								
Ogden	36,900	4	30	3	08	0		
Provo	11,200	2	1	4	.36	0		
Virginia								
Alexandria	18,300	6	2	6	32	0		
Danville	23,000	7	13	4	17	0		
Lynchburg	30,400	6	10	6	20	0		
Newport News	47,100	6	5	2	04	0		
Petersburg	35,700	7	2	1	03	0		
Roanoke	58,200	6	43	5	09	0		
Suffolk				2		0		

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

SMALLPOX—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Washington								
Aberdeen	16,200	3	23	93	5 74	0		
Bremerton		2	1	5		0		
Everett	20,300	7	67	91	3 11	0		
Hoquiam	11,100	2	105	12	1.08	0		
Vancouver	14,500	6	15	19	1 31	0		
Walla Walla		3	3	5		0		
Yakima	22,700	4	20	8	.35	0		
West Virginia								
Bluefield	19,300	3	43	48	2.49	1	0 05	2.1
Charleston	49,000	7	23	52	1.06	0		
Huntington	63,500	4	4	63	.99			
Parkersburg	21,300	5	9	2	09	0		
Wisconsin								
Appleton	21,100	5	1	26	1 23	0		
Ashland		6	6	4				
Beloit	24,800	7	7	1	.04	0		
Eau Claire	22,400	7	20	1	.04	0		
Fond du Lac	26,000	7	4	12	46	0		
Green Bay	34,300	5	4	5	.15	0		
Janesville	20,800	4	6	2	10	0		
Kenosha	50,900	7	18	100	1 96	0		
La Crosse	30,400	4	13	43	1 41	[1] 4	.13	9.3
Madison	46,400	6	40	3	.06			
Oshkosh	33,200	5	26	42	1 27	0		
Racine	67,700	6	55	67	.99	0		
Superior		3	103	11		2		
Wausau	20,100	7	5	5	.25	0		
West Allis	18,400	5	4	7	.38	3	.16	42 9
Wyoming								
Cheyenne	15,500			1	.06	0		

TUBERCULOSIS (ALL FORMS)

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama:						
Anniston	20,500	31	1 51	29	1 41	1 1
Dothan	14,500	10	69	8	.55	1 2
Florence	12,700	35	2.76	24	1.89	1 5
Mobile	66,000			65	.98	
Montgomery	46,500	74	1 59	42	.90	1 8
Selma	17,000			53	3.12	
Tuscaloosa	13,100	12	.92	10	.76	1 2
Arizona:						
Phoenix	38,700			421	10.88	
Tucson	26,700			377	14.12	
Arkansas.						
Hot Springs		3				
Little Rock	74,200	117	1.58	98	1 32	1 2
California:						
Alameda	31,900	33	1 03	12	.38	2.7
Alhambra		36		8		4.5
Bakersfield	23,500			54	2 30	
Berkeley	66,200	98	1 48	31	.47	3 2
Chico				4		
Eureka	13,500	[1] 45	3 33	19	1 41	2 4
Fresno	58,500	62	1 06	46	79	1 3
Glendale	21,300			46	2.16	
Long Beach	91,200	93	1.02	47	52	2 0
Pasadena	56,700	77	1 36	52	92	1 5

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
California—Continued.						
Pomona	15,400	46	2.99	9	0.58	5.1
Richmond	22,500	10	.44	2	.09	5.0
Riverside		72		40		1.8
Sacramento	72,300			137	1.89	
San Bernardino	22,800			99	4.34	
San Jose	43,600			26	.60	
Santa Ana	19,500	28	1.44	19	.97	1.5
Santa Barbara	24,000			37	1.54	
Santa Monica	19,400			20	1.03	
Stockton	47,300	119	2.52	36	.76	3.3
Vallejo	26,600			14	.53	
Colorado						
Boulder	11,800			15	1.27	
Colorado Springs		226		152		1.5
Greeley	12,500			14	1.12	
Pueblo	43,800			40	.91	
Trinidad	11,000			10	.91	
Connecticut						
Danbury				19		
Fairfield	14,500	10	.69			
Greenwich	25,300	36	1.42	14	.55	2.6
Manchester	21,000	12	.57			
Meriden	36,300	22	.61			
Milford	13,500			2	.15	
New Britain	68,000	133	1.96	30	.44	4.4
New London	29,100	40	1.37	21	.72	1.9
Norwich	23,100	29	1.26	15	.65	1.9
Shelton		3		2		1.5
Stamford	40,700			20	.49	
Stratford	16,100	22	1.37	5	.31	4.4
Florida						
St. Petersburg	26,800	26	.97	15	.56	1.7
Tampa	94,700			91	.96	
West Palm Beach				15		
Georgia						
Albany	13,500			18	1.33	
Augusta	55,200			110	1.99	
Brunswick	16,800			17	1.01	
Lagrange	23,500	67	2.85	34	1.45	2.0
Macon	58,200	120	2.06	81	1.39	1.5
Rome	13,900	21	1.51	19	1.37	1.1
Savannah	93,100			161	1.73	
Idaho						
Pocatello	18,300	3	.16	1	.05	3.0
Illinois						
Alton	26,800	29	1.08	10	.37	2.9
Aurora	40,300	101	2.51	38	.94	2.7
Berwyn	18,900			8	.42	
Bloomington	30,400			14	.46	
Blue Island	13,200	16	1.21	16	1.21	1.0
Centralia	14,100	21	1.49			
Champaign	18,200	16	.88	8	.44	2.0
Chicago Heights	22,100			12	.54	
Cicero	62,200	84	1.35	14	.23	6.0
Danville	37,000	90	2.43	20	.54	4.5
Decatur	53,900	179	3.32	32	.59	5.6
East Moline		3		2		1.5
East St. Louis	71,400			70	.98	
Elgin	33,400	34	1.02	6	.18	5.7
Evanston	43,900	47	1.07	18	.41	2.6
Freeport	20,700			14	.68	
Galesburg	24,800			10	.40	
Granite City	18,200			9	.49	
Jacksonville	15,900	51	3.21	30	1.89	1.7
Joliet	40,600	57	1.40	15	.37	3.8
Kewanee	19,700	19	.96	6	.30	3.2
La Salle	13,900	15	1.08	9	.65	1.7
Maywood	14,200	9	.63	6	.42	1.5
Moline	33,900	38	1.12	25	.74	1.5
Murphysboro	12,500	6	.48	5	.40	1.2
Oak Park	51,400	25	.49	14	.27	1.8
Pekin	13,300			4	.30	
Peoria	81,600			24	.29	
Quincy		44		4		11.0
Rock Island	40,000	19	.47	2	.05	9.5

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Illinois—Continued						
Rockford	76,500	183	2 39	35	0 46	5 2
Springfield	63,900	55	86	46	.72	1.2
Streator	15,100	5	.33	4	.26	1.2
Waukegan	22,000	12	.55			
Indiana						
Anderson	33,900			25	74	
Bloomington	12,600	25	1 98	19	1 51	1 3
Connersville	12,500	3	.24	3	.24	1 0
Crawfordsville	10,500			7	.67	
East Chicago	45,600			27	.59	
Elwood				7		
Fort Wayne	97,800			46	47	
Frankfort	13,100			8	61	
Gary	76,900			25	33	
Hammond	50,400	46	.91	20	40	2 3
Huntington	15,900			5	31	
Jeffersonville		4		4		1 0
Kokomo	36,900			23	62	
La Fayette	23,800	19	.80	13	.55	1 5
Logansport	23,100	8	.35	5	22	1.6
Marion	26,300			20	76	
Michigan City	20,300			19	94	
Mishawaka	16,700			13	78	
Muncie	42,500			22	.52	
New Albany				25		
Newcastle	17,000			13	76	
Peru	12,700			10	.79	
Richmond	30,500			21	69	
South Bend	80,100			36	.45	
Terre Haute	71,100			58	82	
Wabash				2	19	
Whiting	12,200			9	74	
Iowa:						
Boone	12,800			4	31	
Burlington	26,400	70	2.65	16	61	4.4
Cedar Rapids	50,600			22	43	
Council Bluffs	39,800			20	50	
Dubuque	41,000			30	73	
Mason City	22,700			3	.13	
Muscatine	16,800	10	60	6	36	1.7
Ottumwa	26,400			7	27	
Kansas:						
Arkansas City	14,000			12	86	
Coffeyville	16,200			8	.49	
Emporia	12,200	38	3 11			
Fort Scott	11,800	12	1.02	5	.42	2.4
Hutchinson	26,000	73	2.81			
Independence	10,900			11	1 01	
Lawrence	12,300	20	1 63	4	.33	5 0
Parsons	14,800	16	1.08	11	.74	1 5
Pittsburg	19,200	18	.94	6	.31	3.0
Topeka	55,400	110	1 99	36	.65	3 1
Wichita	88,400	114	1 29	40	.45	2.8
Kentucky						
Covington	58,300			74	1.27	
Henderson	12,600	15	1.19			
Newport		44		44		1 0
Paducah	25,900			54	2.08	
Louisiana:						
Baton Rouge	27,800			18	.65	
Lake Charles		23		15		1.5
Shreveport	57,900			[1]72	1.24	
Maine.						
Auburn	18,100	11	.61	1	.06	11.0
Bangor	26,600	34	1 28	20	.75	1.7
Bath	17,800	7	.39	5	.28	1.4
Biddeford	18 500	28	1 51	13	.70	2 2
Lewiston	34,900	40	1 15	16	.46	2.5
Portland	75,300	73	97	30	.40	2.4
Sanford	11.600	7	60	4	.34	1.7
South Portland		13				
Waterville	14,400	5	.35	4	.28	1.2
Westbrook		3		1		

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Massachusetts						
Adams	13,500	25	1.85	9	0.67	2.8
Amesbury	11,200	12	1.07	1	.09	12.0
Arlington	24,900	59	2.37	5	.20	11.8
Athol		3		2		1.5
Attleboro	20,600	85	4.13	42	2.04	2.0
Belmont	15,300	27	1.76	7	.46	3.9
Beverly	22,700	41	1.81	7	.31	5.9
Braintree	13,200			43	3.26	
Brockton	65,300	84	1.29	23	.35	3.7
Brookline	42,700	46	1.08	24	.56	1.9
Chelsea	47,200	88	1.86	37	.78	2.4
Chicopee	41,900	79	1.89	37	.88	2.1
Clinton	14,200	14	.99	1	.07	14.0
Danvers	11,800	27	2.29	15	1.27	1.8
Dedham	13,900	8	.58	3	.22	2.7
Easthampton	11,600	18	1.55	10	.86	1.8
Everett	42,100	73	1.73	18	.43	4.1
Framingham	21,100	54	2.56	14	.66	3.9
Gardner	18,700	56	2.99	11	.59	5.1
Gloucester	23,400	41	1.75	12	.51	3.4
Greenfield	15,200	11	.72	5	.33	2.2
Haverhill	49,200	78	1.59	73	1.48	1.1
Holyoke	60,300	76	1.26	68	1.13	1.1
Lawrence	93,500	148	1.58	53	.57	2.8
Leominster	22,100	30	1.36	13	.59	2.3
Malden	51,800	119	2.30	22	.42	5.4
Marlboro	16,200	18	1.11	10	.62	1.8
Medford	47,600	60	1.26	15	.32	4.0
Melrose	20,200	29	1.44	16	.79	1.8
Methuen	20,600	52	2.52	9	.44	5.8
Milford	14,800	16	1.08	15	1.01	1.1
Milton		12		2		6.0
Newburyport	15,700			11	.70	
Newton	53,000	65	1.23	23	.43	2.8
North Adams	22,700	17	.75	7	.31	2.4
Northampton	24,100	[1] 78	3.24	[1] 14	.58	5.6
Northbridge	10,100	6	.59	3	.30	2.0
Palmer		10		5		
Peabody	19,900	21	1.06	5	.25	4.2
Pittsfield	46,900	42	.90	27	.58	1.6
Plymouth	13,200	12	.91	7	.53	1.7
Quincy	60,100	81	1.35	29	.48	2.8
Revere	33,300	44	1.32	2	.06	22.0
Salem	42,800	72	1.68	32	.75	2.2
Saugus	12,700	8	.63	3	.24	2.7
Somerville	99,000	144	1.45	52	.53	2.8
Southbridge	15,500	7	.45	4	.26	1.7
Taunton	39,300	60	1.52	37	.94	1.6
Wakefield	15,600	17	1.09	6	.38	2.8
Waltham	34,700	38	1.10	21	.61	1.8
Watertown	25,500	40	1.57	4	.16	10.0
West Springfield	15,300	12	.78			
Westfield	19,300	25	1.30	1	.05	25.0
Winchester	11,600	12	1.03			
Winthrop	16,200	11	.68	5	.31	2.2
Woburn	18,400	13	.71	8	.43	1.6
Michigan						
Adrian	12,500	15	1.20			
Ann Arbor	22,200	124	5.59	11	.50	11.3
Battle Creek	42,300	81	1.91	12	.28	6.7
Bay City	48,900	35	.72	29	.59	1.2
Benton Harbor	14,000	20	1.43	3	.21	6.7
Cadillac		1		1		1.0
Hamtramck	81,700	100	1.22	29	.35	3.4
Highland Park	72,300	61	.84	24	.33	2.5
Holland	13,100	13	.99	5	.38	2.6
Ironwood	17,400	22	1.26	19	1.09	1.2
Ishpeming		14		7		2.0
Jackson	58,000	55	.95	21	.36	2.6
Kalamazoo	53,600	56	1.04	28	.52	2.0
Lansing	70,800	109	1.54	25	.35	4.4
Marquette	13,400	17	1.27	7	.52	2.4
Muskegon	43,100	24	.56	18	.42	1.3

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Michigan—Continued.						
Muskegon Heights		13		4		3 2
Pontiac	47,500	102	2.15	40	0 84	2 5
Port Huron	30,000	29	.97	19	.63	1 5
River Rouge		8		5		1 6
Saginaw	72,100	86	1.19	45	.62	1 9
Saulte Ste Marie		18		6		3 0
Minnesota						
Albert Lea		2		1		2 0
Austin	11,900	1	.08			
Brainerd				3		
Faribault	12,300			14	1.14	
Hibbing	18,000			8	.44	
Mankato	13,700			8	.58	
Rochester	17,000	64	3.76	[1] 22	1 29	2.9
Virginia	16,000	5	.31	5	.31	1 0
Winona	19,500	13	.67			
Mississippi						
Biloxi	12,600			5	.40	
Jackson	23,700	106	4.47	11	.46	9 6
Laurel	15,700	71	4.52			
Meridian	24,300	29	1.19			
Natchez	13,100	33	2.52	19	1 45	1 7
Missouri						
Independence	12,700			4	31	
Joplin		6				
Moberly	13,900			15	.79	
St. Joseph	78,300			49	.63	
Springfield	42,100			38	.90	
Montana.						
Anaconda	12,500			8	.64	
Butte	42,900			86	2.00	
Great Falls	29,900			12	.40	
Helena				25		
Missoula		18		5		3 6
Nebraska.						
Lincoln	60,900	40	.66	25	41	1.6
North Platte	13,700			5	.36	
Nevada.						
Reno	12,700			4	31	
New Hampshire						
Berlin	18,600			3	.16	
Claremont		47		6		
Concord	22,500			24	1.07	
Dover				11		
Keene	11,900			8	.67	
Manchester	83,100			29	35	
Nashua	29,700			10	.34	
Portsmouth	14,900	90	6.04			
New Jersey						
Asbury Park	13,700	31	2.26	13	.95	2.4
Bayonne	88,800	89	1.00	34	.38	2.6
Belleville	18,900	31	1.64	11	.58	2 8
Bloomfield	26,000	26	1.00	5	.19	5 2
Bridgeton	14,400	11	.76	7	.49	1.6
Carteret	14,000	20	1.43	6	.43	3.3
Clifton	34,700	49	1.41	18	.52	2.7
Collingswood				6		
Dover		15		5		3 0
East Orange	60,000	63	1.05	33	.55	1.9
Englewood	12,600	18	1.43	7	.56	2.6
Garfield	24,600	36	1.46	10	.41	3.6
Gloucester City	13,700	14	1.02	4	.29	3 5
Hackensack	19,700	22	1.12	12	.61	1.8
Harrison	16,400	28	1.71			
Hoboken		107		42		2 5
Irvington	33,200	34	1.02	14	42	2 4
Kearny	31,300	30	.96	10	.32	3 0
Lodi		26		8		3 2
Long Branch	13,600	28	2.06	8	59	3 5
Montclair	32,900	62	1 88	25	.76	2 5
Morristown	12,600	29	2.30	3	24	9 7
New Brunswick	38,000	78	2.05	15	.39	5 2
Nutley		20		3		6.7
Orange	35,400	71	2.01	23	.65	3.1
Passaic	69,000	70	1 01	31	.45	2.3

[1] Includes nonresidents

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
New Jersey—Continued						
Perth Amboy	47,100	61	1.30	29	0.62	2.1
Phillipsburg	18,600	7	.38			
Plainfield	31,700	35	1.10	21	.66	1.7
Rahway	12,000	8	.67	8	.67	1.0
Red Bank		18		4		4.5
Ridgefield Park		7		5		1.4
Rutherford		3		1		3.0
Summit	11,700	18	1.54	8	.68	2.2
Union City	63,100	21	.33			
West New York	39,200	35	.89	11	.28	3.2
West Orange	18,200	21	1.15	3	.16	7.0
New Mexico						
Albuquerque	21,000	406	19.33	262	12.48	1.5
New York						
Amsterdam	35,300	54	1.53	17	.48	3.2
Binghamton	71,900	85	1.18	20	.28	4.2
Corning	15,700	20	1.27	5	.32	4.0
Cortland	13,900	14	1.01	5	.36	2.8
Dunkirk	19,900	32	1.61	13	.65	2.5
Elmira	48,400	66	1.36	13	.27	5.1
Freeport		25		3		8.3
Geneva	15,900	19	1.19	8	.50	2.4
Glens Falls	17,900	31	1.73	13	.73	2.4
Gloversville	22,100	20	.90	6	.27	3.3
Hornell	15,800			6	.38	
Hudson	11,800	47	3.98	12	1.02	3.9
Ilion	10,400	10	.96	8	.77	1.2
Ithaca	18,900	29	1.53	16	.85	1.8
Jamestown	43,400	51	1.18	15	.35	3.4
Johnson City		7		3		2.3
Johnstown	10,700	12	1.12	8	.75	1.5
Kingston	28,100	43	1.53	42	1.49	1.0
Lackawanna	20,200	59	2.92	8	.40	7.4
Little Falls	12,400	20	1.61	6	.48	3.3
Lockport	21,700	21	.97	8	.37	2.6
Middletown	20,400	29	1.42	10	.50	2.9
Mount Vernon	50,400	49	.97	21	.42	2.3
New Rochelle	44,200	53	1.20	17	.38	3.1
Newburgh	30,400	52	1.71	38	1.25	1.4
Niagara Falls	57,000	98	1.72	25	.44	3.9
North Tonawanda	17,400	27	1.55	11	.63	2.5
Olean	21,300	64	3.00	4	.19	16.0
Peekskill	18,000	29	1.61	23	1.28	1.3
Plattsburg	11,600			10	.86	
Poughkeepsie	35,700	63	1.76	21	.59	3.0
Rensselaer	11,400	34	2.98	3	.26	11.3
Rome	30,300	48	1.58	27	.89	1.8
Salamanca		5		4		1.2
Saratoga Springs	13,900	22	1.58	20	1.44	1.1
Schenectady	92,800	115	1.24	36	.39	3.2
Troy	72,200	178	2.47	60	.83	3.0
Watertown	32,800	41	1.25	31	.95	1.3
Watervliet	16,200	30	1.85	11	.68	2.7
White Plains	27,400	46	1.68	12	.44	3.8
North Carolina						
Asheville	31,500	471	14.95	152	4.83	3.1
Charlotte	53,300			43	.81	
Greensboro	47,100			36	.76	
High Point	23,600			19	.81	
New Bern	12,200			15	1.23	
Raleigh	30,400			51	1.68	
Rocky Mount	15,100			15	.99	
Salisbury	17,700	10	.56	6	.34	1.7
Wilmington	37,1[illegible]			17	.46	
Wilson	12,800			23	1.80	
Winston-Salem	69,000	160	2.32	82	1.19	2.0
North Dakota						
Fargo	24,900	6	.24	0		
Ohio						
Ashtabula	25,100			9	.36	
Barberton	23,300	72	3.09	10	.43	7.2
Bellaire	16,300	11	.67	6	.37	1.8
Bellefontaine		5		4		1.2
Bucyrus	11,700	9	.77	6	.51	1.5
Cambridge	14,000			19	1.36	

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Ohio—Continued						
Chillicothe	16,600	11	0.66	10	0.60	1.1
Cleveland Heights	22,200	17	77	4	18	4.2
Conneaut	----	4	----	2	----	2.0
Coshocton	11,600	16	1.38	3	26	5.3
Cuyanoga Falls	13,700	27	1.97	1	07	27.0
East Cleveland	37,600	45	1.20	11	29	4.1
East Liverpool	22,000	28	1.27	25	1.14	1.1
East Youngstown (Campbell)	16,000	----	----	3	19	----
Elyria	23,800	----	----	6	25	----
Findlay	18,200	25	1.37	11	60	2.3
Fostoria	----	8	----	4		2.0
Fremont	13,900	----	----	8	.58	----
Hamilton	42,400	----	----	46	1.08	----
Ironton	14,500	----	----	16	1.10	----
Kenmore	19,400	41	2.11	7	36	5.9
Lakewood	56,800	18	32	18	32	1.0
Lancaster	16,100	22	1.37	10	62	2.2
Lima	46,700	----	----	25	54	----
Lorain	42,300	51	1.21	20	.47	2.5
Mansfield	31,800	33	1.04	24	.75	1.4
Marietta	15,300	----	----	6	39	----
Marion	32,500	60	1.85	20	62	3.0
Martins Ferry	15,500	----	----	12	.77	----
Middletown	30,800	37	1.20	21	68	1.8
Newark	30,500	69	2.26	23	.75	3.0
Niles	16,600	8	48	4	.24	2.0
Norwood	29,900	29	97	10	33	2.9
Piqua	16,000	12	75	----	----	----
Salem	11,100	34	3.06	8	.72	4.2
Sandusky	24,500	----	----	11	45	----
Springfield	68,700	----	----	48	.70	----
Steubenville	32,000	26	.81	10	31	2.6
Zanesville	30,400	51	1.68	23	76	2.2
Oklahoma						
Ardmore	17,200	46	2.67	14	81	3.3
Guthrie	11,800	----	----	15	1.27	----
Okmulgee	25,300	34	1.34	27	1.07	1.3
Sapulpa	14,200	6	.42	1	07	6.0
Oregon						
Astoria	16,500	----	----	5	30	----
Eugene	11,400	----	----	7	61	----
Pennsylvania						
Allentown	92,200	----	----	72	78	----
Altoona	66,100	34	51	25	38	1.4
Braddock	21,700	30	1.38	18	.83	1.7
Bradford	15,800	----	----	12	.76	----
Butler	25,200	----	----	18	.71	----
Canonsburg	13,500	----	----	5	.37	----
Carlisle	11,400	4	35	----	----	----
Carnegie	12,400	----	----	5	.40	----
Carrick	13,000	2	.15	----	----	----
Charleroi	12,600	3	.24	----	----	----
Clairton	14,900	11	.74	3	.26	3.7
Coatesville	16,500	39	2.36	5	.30	7.8
Columbia	----	4	----	----	----	----
Connellsville	14,300	11	.77	9	.63	1.2
Duquesne	20,900	22	1.05	2	.10	11.0
Easton	36,800	----	----	24	.65	----
Farrell	18,700	9	.48	2	.11	4.5
Harrisburg	83,400	47	.56	39	.47	1.2
Hazleton	36,100	17	47	----	----	----
Homestead	21,400	22	1.03	19	.89	1.2
Jeannette	11,700	----	----	5	.43	----
Kingston	18,000	----	----	9	.50	----
Lancaster	56,500	----	----	34	.60	----
Lewistown	----	----	----	15	----	----
McKees Rocks	18,100	19	1.05	4	.22	4.7
McKeesport	49,100	56	1.14	16	.33	3.5
Monessen	21,200	5	24	2	.09	2.5
Mount Carmel	----	5	----	0	----	----
Nanticoke	24,700	----	----	14	.57	----
New Castle	49,800	----	----	24	.48	----
Norristown	34,800	----	----	21	.60	----
North Braddock	16,700	19	1.14	10	.60	1.9

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Pennsylvania—Continued						
Oil City	23,300	10	0 43			
Olyphant	11,200	12	1.07	6	0.54	2 0
Pittston	19,800	6	30			
Plymouth		5				
Pottstown	18,500			6	.32	
Sharon	25,000			16	.64	
Steelton		15		15		1 0
Sunbury	16,800	11	65	11	65	1 0
Swissvale	12,900			9	70	
Vandergrift				4		
Warren	15,100	74	4 90	8	53	9 2
Washington	23,000	4	17			
West Chester				7		
Wilkes-Barre	77,600	55	71	41	53	1 3
Wilkinsburg	27,400	15	55	15	55	1.0
Windber		2		2		
Woodlawn	18,900	11	.58	3	16	3.7
York	49,100			25	51	
Rhode Island						
Cranston	34,500	13	.38	11	32	1 2
Newport	27,800			24	.86	
Pawtucket	69,800			19	.27	
Woonsocket	49,700			27	54	
South Carolina						
Anderson	11,100	5	.45	2	18	2 5
Charleston	73,100			135	1 85	
Greenville	27,300			19	70	
Spartanburg	25,500			35	1 37	
Sumter				16		
South Dakota						
Sioux Falls	30,100	25	83	25	83	1 0
Tennessee						
Chattanooga	66,600	143	2 15			
Knoxville	95,500			110	1 15	
Texas						
Beaumont	50,600			33	.65	
Cleburne	14,200	7	49	4	.28	1.8
Corpus Christi	11,800	8	68	5	.42	1.6
Galveston	48,400			43	.89	
Greenville	14,400			7	.49	
Orange		8		6		1.3
San Angelo				74		
Texarkana	12,400	7	.56			
Tyler	13,000			4	32	
Waco	43,900			45	1.03	
Utah						
Logan		1		1		1.0
Ogden	36,900			6	.16	
Provo	11,200			2	.18	
Vermont						
Barre				33		
Burlington	24,100			14	.58	
Virginia						
Alexandria	18,500			16	86	
Charlottesville	11,200			9	.80	
Danville	23,000	63	2.74	16	.70	3.9
Lynchburg	30,400			31	1.02	
Newport News	47,100			74	1.57	
Petersburg	35,700	84	2 35	53	1 48	1.6
Portsmouth	59,000	84	1 42	55	93	1 5
Roanoke	58,200			45	.77	
Suffolk				45		
Washington						
Aberdeen	16,200	17	1.05	17	1 05	1 0
Bremerton		9		1		9 0
Everett	29,300	17	.58	1	03	17 0
Vancouver	14,500			6	.41	
Walla Walla		28		21		1.3
Yakima	22,700	16	70	10	44	1 6
West Virginia						
Bluefield	19,300			12	62	
Charleston	49,000			43	88	
Clarksburg	30,400			20	.66	
Martinsburg	13,500			15	1 11	

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (ALL FORMS)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
West Virginia—Continued.						
Morgantown	13,800	----------	----------	11	0 80	----------
Parkersburg	21,300	----------	----------	10	47	----------
Wheeling	----------	184	----------	46	----------	4.0
Wisconsin:						
Appleton	21,100	14	0 66	12	57	1 2
Beloit	24,800	20	81	11	44	1 8
Eau Claire	22,400	25	1 12	12	54	2 1
Fond du Lac	26,000	----------	----------	2	08	----------
Green Bay	34,300	26	76	19	55	1 4
Janesville	20,800	----------	----------	5	24	----------
Kenosha	50,900	46	.90	15	29	3 0
La Crosse	30,400	36	1 18	21	.69	1 7
Madison	46,400	35	75	----------	----------	----------
Manitowoc	22,100	16	72	16	.72	1 0
Marinette	----------	37	----------	16	----------	2 3
Oshkosh	33,200	29	.87	12	36	2 4
Racine	67,700	87	1.29	31	.46	2 8
Sheboygan	33,500	28	84	15	.45	1.9
Superior	----------	----------	----------	41	----------	----------
Waukesha	14,700	10	.68	10	.68	1 0
Wausau	20,100	20	1.00	8	.40	2 5
West Allis	18,400	28	1.52	8	.43	3.5
Wyoming:						
Cheyenne	15,500	----------	----------	8	.52	----------

TUBERCULOSIS (PULMONARY)

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama						
Anniston	20,500	31	1 51	29	1 41	1 1
Dothan	14,500	10	69	8	55	1 2
Florence	12,700	35	2.76	24	1.89	1 5
Mobile	66,000	----------	----------	62	94	----------
Tuscaloosa	13,100	12	92	10	76	1 2
Arizona						
Phoenix	38,700	----------	----------	303	7 83	----------
Arkansas						
Little Rock	74,200	117	1 58	91	1 23	1.3
California						
Alhambra	----------	35	----------	8	----------	4 4
Bakersfield	23,500	----------	----------	50	2 13	----------
Berkeley	66,200	93	1 40	22	33	4.2
Chico	----------	----------	----------	4	----------	----------
Glendale	21,300	----------	----------	42	1 97	----------
Long Beach	91,200	53	.58	39	.43	1 4
Pasadena	56,700	----------	----------	44	.78	----------
Pomona	15,400	46	2.99	9	58	5 1
Riverside	----------	----------	----------	31	----------	----------
Sacramento	72,300	----------	----------	101	1 40	----------
San Bernardino	22,800	----------	----------	88	3 86	----------
Santa Ana	19,500	14	.72	12	62	1 2
Santa Monica	19,400	----------	----------	16	82	----------
Stockton	47,300	113	2.39	28	.59	4 0
Vallejo	26,600	----------	----------	9	34	----------
Colorado						
Boulder	11,800	----------	----------	14	1.19	----------
Greeley	12,500	----------	----------	13	1 04	----------
Pueblo	43,800	----------	----------	36	.82	----------
Trinidad	11,000	----------	----------	7	64	----------
Connecticut						
Danbury	----------	----------	----------	14	----------	----------
Fairfield	14,500	10	.69	----------	----------	----------
Greenwich	25,300	29	1 15	11	.43	2 6
Manchester	21,000	12	57	----------	----------	----------
Meriden	36,300	22	61	----------	----------	----------
Milford	13,500	6	44	0	----------	----------
New Britain	68,000	102	1 50	25	.37	4 1
New London	29,100	36	1 24	15	.52	2 4
Norwich	23,100	28	1.21	15	65	1.9
Shelton	----------	3	----------	2	----------	1 5
Stamford	40,700	----------	----------	20	.49	----------
Stratford	16,100	22	1.37	5	.31	4.4

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (PULMONARY)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Florida						
Tampa	94,700			88	0.93	
West Palm Beach				9		
Georgia						
Albany	13,500			16	1.19	
Augusta	55,200			91	1.65	
Brunswick	16,800			17	1.01	
Lagrange	23,500	63	2.68	32	1.36	2.0
Savannah	93,100			121	1.30	
Idaho.						
Pocatello	18,300	2	.11	1	.05	2.0
Illinois						
Alton	26,800			6	.22	
Aurora	40,300	93	2.31	35	.87	2.7
Berwyn	18,900	15	79	7	.37	2.1
Bloomington	30,400	58	1.91	9	.30	6.4
Blue Island	13,200			12	91	
Centralia	14,100	21	1.49			
Champaign	18,200			8	44	
Chicago Heights	22,100			5	.23	
Cicero	62,200	73	1.17	14	.23	5.2
Danville	37,000	90	2.43	20	.54	4.5
Decatur	53,900			30	.56	
East Moline		3		2		1.5
East St Louis	71,400			44	.62	
Elgin	33,400	34	1.02	4	.12	8.5
Freeport	20,700	5	24			
Granite City	18,200			6	33	
Jacksonville	15,900	51	3.21	26	1.64	2.0
Joliet	40,600			13	.32	
Kewanee	19,700	19	96	6	30	3.2
La Salle	13,900	13	.94	9	.65	1.4
Maywood	14,200			6	.42	
Moline	33,900	38	1.12	21	.62	1.8
Murphysboro	12,500			3	.24	
Oak Park	51,400	25	.49	14	.27	1.8
Pekin	13,300			4	.30	
Peoria	81,600			10	.12	
Quincy		44		4		11.0
Rock Island	40,000	19	.47	2	.05	9.5
Rockford	76,500			23	.30	
Springfield	63,900	51	.80	37	.58	1.4
Streator	15,100			4	.26	
Indiana						
Anderson	33,900			25	.74	
Connersville	12,500	3	.24	3	.24	1.0
Crawfordsville	10,500			4	.38	
East Chicago	45,600			22	.48	
Elwood				6		
Fort Wayne	97,800			42	.43	
Frankfort	13,100			8	.61	
Gary	76,900	46	.60	22	29	2.1
Huntington	15,900			5	.31	
Jeffersonville		2		2		
Kokomo	36,900			21	57	
La Fayette	23,800	19	.80	13	55	1.5
Logansport	23,100	6	.26	3	.13	2.0
Marion	26,300			15	.57	
Michigan City	20,300			16	.79	
Muncie	42,500			16	38	
New Albany				19		
Richmond	30,500			16	.52	
Terre Haute	71,100			50	.70	
Wabash				1		
Whiting	12,200	15	1.23	7	.57	2.1
Iowa						
Boone	12,800			3	.23	
Cedar Rapids	50,600			15	.30	
Council Bluffs	39,800			12	.30	
Dubuque	41,000			21	.51	
Muscatine	16,800	10	.60	4	.24	2.5

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (PULMONARY)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Kansas:						
Coffeyville	16,200	22	1.36	8	0.49	2.7
Emporia	12,200	35	2.87			
Fort Scott	11,800	12	1.02	5	.42	2.4
Lawrence	12,300	19	1.54	4	.33	4.7
Parsons	14,800			8	.54	
Pittsburg	19,200	16	.83	4	.21	4.0
Kentucky:						
Covington	58,300			68	1.17	
Henderson	12,600	4	.32			
Newport		41		41		1.0
Louisiana:						
Baton Rouge	27,800			2	.07	
Lake Charles		21		12		1.7
Shreveport	57,900			[1] 60	1.04	
Maine:						
Auburn	18,100			1	.06	
Bath	17,800	7	.39	5	.28	1.4
Biddeford	18,500	28	1.51	11	.59	2.5
Lewiston	34,900	28	.80	8	.23	3.5
Portland	75,300	50	.66	22	.29	2.3
Sanford	11,600	7	.60	4	.34	1.7
South Portland		13				
Massachusetts:						
Adams	13,500	22	1.63	7	.52	3.1
Amesbury	11,200	10	.89	1	.09	10.0
Arlington	24,900	34	1.37	4	.16	8.5
Athol		3		2		1.5
Attleboro	20,600	69	3.35	39	1.89	1.8
Belmont	15,300	25	1.63	6	.39	4.2
Beverly	22,700	22	.97	7	.31	3.1
Braintree	13,200			35	2.65	
Brockton	65,300	70	1.07	15	.23	4.7
Brookline	42,700	40	.94	22	.52	1.8
Chelsea	47,200	82	1.74	31	.66	2.6
Chicopee	41,900	53	1.26	28	.67	1.9
Clinton	14,200	8	.56	1	.07	8.0
Danvers	11,800	26	2.20	11	.93	2.4
Dedham	13,900	5	.36	3	.22	1.7
Easthampton	11,600	14	1.21	6	.52	2.3
Everett	42,100	56	1.33	18	.43	3.1
Framingham	21,100	48	2.27	14	.66	3.4
Gardner	18,700	56	2.99	8	.43	7.0
Gloucester	23,400	35	1.50	11	.47	3.2
Greenfield	15,200	10	.66	4	.26	2.5
Haverhill	49,200	54	1.10	33	.67	1.6
Holyoke	60,300	64	1.06	56	.93	1.1
Lawrence	93,500	82	.88	41	.44	2.0
Leominster	22,100	23	1.04	10	.45	2.3
Malden	51,800	71	1.37	14	.27	5.1
Marlboro	16,200	16	.99	9	.56	1.8
Medford	47,600	50	1.05	0		
Melrose	20,200	23	1.14	12	.59	1.9
Methuen	20,600	31	1.50	8	.39	3.9
Milford	14,800	14	.95	10	.68	1.4
Milton		9		2		4.5
Newburyport	15,700			7	.45	
Newton	53,000	51	.96	20	.38	2.5
North Adams	22,700	17	.75	7	.31	2.4
Northampton	24,100	[1] 58	2.41	[1] 12	.50	4.8
Northbridge	10,100	4	.40	2	.20	2.0
Palmer				3		
Peabody	19,900	14	.70	4	.20	3.5
Pittsfield	46,900	38	.81	24	.51	1.6
Plymouth	13,200			6	.45	
Quincy	60,100	62	1.03	20	.33	3.1
Revere	33,300	32	.96	2	.06	16.0
Salem	42,800	56	1.31	20	.47	2.8
Saugus	12,700	8	.63	3	.24	2.7
Somerville	99,000	116	1.17	39	.39	3.0
Southbridge	15,500	7	.45	4	.26	1.7
Taunton	39,300	56	1.42	33	.84	1.7
Wakefield	15,600	11	.71	5	.32	2.2
Waltham	34,700	31	.89	12	.35	2.6

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (PULMONARY)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Massachusetts—Continued						
Watertown	25,500	28	1.10	4	0.16	7.0
West Springfield	15,300	12	.78			
Westfield	19,300	24	1.24	1	.05	24.0
Winchester	11,600	7	.60	0		
Winthrop	16,200	8	.49	5	.31	1.6
Woburn	18,400	13	.71	8	.43	1.6
Michigan						
Ann Arbor	22,200	92	4.14	8	.36	11.5
Bay City	48,900	33	.67	21	.43	1.6
Hamtramck	81,700			27	.33	
Highland Park	72,300			14	.19	
Holland	13,100	13	.99	5	.38	2.6
Ironwood	17,400	21	1.21	18	1.03	1.2
Ishpeming		14		7		2.0
Jackson	58,000	55	.95	20	.34	2.7
Kalamazoo	53,600	51	.95	25	.47	2.0
Lansing	70,800	87	1.23	14	.20	6.2
Marquette	13,400	16	1.19	7	.52	2.3
Muskegon Heights		13		4		3.2
River Rouge		5		3		1.7
Sault Ste Marie		18		6		3.0
Minnesota						
Albert Lea		1		1		1.0
Austin	11,900	1	.08			
Faribault	12,300			7	.57	
Mankato	13,700			5	.36	
Rochester	17,000	52	3.06	[1] 17	1.00	3.1
Virginia	16,000	5	.31	5	.31	1.0
Winona	19,500	5	.26			
Mississippi						
Biloxi	12,600			5	.40	
Meridian	24,300	24	.99			
Natchez	13,100	28	2.14	18	1.37	1.6
Missouri						
Independence	12,700			4	.31	
Joplin		6				
Moberly	13,900			4	.29	
St Joseph	78,300			41	.52	
Springfield	42,100	50	1.19	30	.71	1.7
Montana						
Anaconda	12,500			7	.56	
Butte	42,900			84	1.96	
Great Falls	29,900			10	.33	
Helena				21		
Nebraska						
Lincoln	60,900	40	.66	25	.41	1.6
North Platte	13,700			5	.36	
Nevada						
Reno	12,700			4	.31	
New Hampshire						
Berlin	18,600	33	1.77	2	.11	16.5
Concord	22,500			22	.98	
Dover				8		
Keene	11,900	12	1.01	0		
Manchester	83,100			19	.23	
Nashua	29,700			5	.17	
Portsmouth	14,900	75	5.03			
New Jersey						
Asbury Park	13,700	31	2.26	12	.88	2.6
Bayonne	88,800			30	.34	
Belleville	18,900	20	1.06	10	.53	2.0
Bloomfield	26,000	25	.96	5	.19	5.0
Bridgeton	14,400	11	.76	7	.49	1.6
Carteret	14,000	18	1.29			
Clifton	34,700	49	1.41	18	.52	2.7
Collingswood				4		
Dover		15		5		3.0
East Orange	60,000	58	.97	33	.55	1.8
Englewood	12,600			6	.48	
Gloucester City	13,700	14	1.02	4	.29	3.5
Harrison	16,400	28	1.71			
Hoboken		91				

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (PULMONARY)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
New Jersey—Continued						
Irvington	33, 200	34	1.02	14	0.42	2.4
Kearny	31, 300	12	38	9	29	1.3
Lodi		16		7		2.3
Long Branch	13, 600	24	1.76	6	44	4.0
Montclair	32, 900	62	1.88	25	76	2.5
Morristown	12, 600	16	1.27	3	24	5.3
Nutley		18		2		9.0
Orange	35, 400	45	1.27	18	51	2.5
Passaic	69, 000	52	75	21	30	2.5
Phillipsburg	18, 600	7	38			
Plainfield	31, 700	30	95	17	54	1.8
Rahway	12, 000	6	50	6	50	1.0
Red Bank		18		4		4.5
Ridgefield Park				5		
Rutherford		3		1		3.0
Summit	11, 700			8	68	
Union City	63, 100	4	06			
New Mexico:						
Albuquerque	21, 000			246	11.71	
New York						
Amsterdam	35, 300	52	1.47	15	.42	3.5
Binghamton	71, 900	80	1.11	15	.21	5.3
Corning	15, 700	19	1.21	4	25	4.7
Cortland	13, 900	13	94	4	29	3.2
Dunkirk	19, 900	29	1.46	9	45	3.2
Elmira	48, 400	58	1.20			
Freeport		3		2		1.5
Geneva	15, 900	7	.44	5	31	1.4
Hornell	15, 800			5	32	
Ilion	10, 400	10	96	8	77	1.2
Ithaca	18, 900	23	1.22	15	79	1.5
Jamestown	43, 400	43	99	12	28	3.6
Johnson City		7		1		7.0
Johnstown	10, 700	9	84	7	65	1.3
Kingston	28, 100	43	1.53	42	1.49	1.0
Lackawanna	20, 200	54	2.67	7	35	7.7
Lockport	21, 700	20	92	7	32	2.9
Mount Vernon	50, 400	38	.75	17	34	2.2
New Rochelle	44, 200	49	1.11	12	27	4.1
Niagara Falls	57, 000	91	1.60	21	37	4.3
North Tonawanda	17, 400	24	1.38	7	40	3.4
Olean	21, 300	59	2.77	0		
Peekskill	18, 000	29	1.61	23	1.28	1.3
Plattsburg	11, 600			7	60	
Poughkeepsie	35, 700	50	1.40	12	34	4.2
Rensselaer	11, 400	19	1.67	2	18	9.5
Rome	30, 300	36	1.19	21	69	1.7
Salamanca		5		4		1.2
Schenectady	92, 800	108	1.16	30	32	3.6
Watervliet	16, 200	29	1.79	0		
White Plains	27, 400	42	1.53	9	33	4.7
North Carolina.						
Greensboro	47, 100	41	.87	32	.68	1.3
High Point	23, 600			17	.72	
New Bern	12, 200			12	98	
Raleigh	30, 400			50	1.64	
Rocky Mount	15, 100			15	99	
Salisbury	17, 700	10	56	6	34	1.7
Wilmington	37, 100			12	.32	
Wilson	12, 800			21	1.64	
Winston-Salem	69, 000	148	2.14	72	1.04	2.1
Ohio						
Ashtabula	25, 100			8	.32	
Barberton	23, 300	72	3.09	10	.43	7.2
Bellaire	16, 300	9	.55	6	.37	1.5
Bucyrus	11, 700	9	.77	4	.34	2.2
Cambridge	14, 000			14	1.00	
Cleveland Heights	22, 200	17	77	4	.18	4.2
Coshocton	11, 600	16	1.38	3	.26	5.3
East Cleveland	37, 600	43	1.14	7	.19	6.1
East Liverpool	22, 000			21	.95	
East Youngstown (Campbell)	16, 000	9	.56	1	.06	9.0
Elyria	23, 800	8	.34	6	.25	1.3
Fostoria		7		3		2.3

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (PULMONARY)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Ohio—Continued						
Fremont	13, 900			7	0 50	
Hamilton	42, 400			30	71	
Lakewood	56, 800	14	0 25	14	25	1 0
Lancaster	16, 100	22	1 37	10	62	2.2
Lima	46 700			23	49	
Lorain	42, 300	49	1 16	18	.43	2 7
Marietta	15, 300			5	33	
Marion	32, 500	60	1 85	20	62	3 0
Martins Ferry	15, 500			11	71	
Middletown	30, 800	37	1 20	12	39	3 1
Newark	30, 500	69	2 26	23	75	3 0
Norwood	29, 900			10	33	
Piqua	16, 000	11	69			
Salem	11, 100	34	3 06	6	54	5 7
Sandusky	24, 500			11	45	
Springfield	68, 700			46	67	
Steubenville	32, 000	26	81	10	31	2 6
Zanesville	30, 400	47	1 55	19	62	2 5
Oklahoma						
Ardmore	17, 200	24	1 40	4	23	6 0
Guthrie	11, 800			15	1 27	
Okmulgee	25, 300	7	28	7	.28	1 0
Sapulpa	14, 200	6	42	1	07	6 0
Oregon						
Astoria	16, 500			5	.30	
Eugene	11, 400			5	44	
Pennsylvania						
Altoona	66, 100	34	51	25	38	1 4
Braddock	21, 700	20	92	12	55	1 7
Bradford	15, 800	1	06			
Butler	25, 200			12	.48	
Canonsburg	13, 500			4	.30	
Carnegie	12, 400			3	.24	
Farrell	18, 700	9	.48	2	.11	4.5
Harrisburg	83, 400			34	.41	
Homestead	21, 400	22	1 03	19	.89	1 2
Jeannette	11, 700			5	.43	
Kingston	18, 000	13	.72	8	.44	1 6
Lancaster	56, 500	20	.35			
Lewistown				15		
McKeesport	49, 100			13	.26	
Monessen	21, 200	5	.24	2	09	2 5
Mount Carmel		5		0		
Nanticoke	24, 700			13	53	
Norristown	34, 800	2	.06	0		
North Braddock	16, 700	19	1.14	10	.60	1 9
Oil City	23, 300	10	43			
Olyphant	11, 200	12	1 07	4	.36	3 0
Pittston	19, 800	6	.30			
Pottstown	18, 500			6	32	
Sharon	25, 000	12	48			
Steelton		15		15		1.0
Sunbury	16, 800			6	.36	
Swissvale	12 900			9	.70	
Washington	23, 000	4	.17			
West Chester				7		
Windber				2		
Woodlawn	18, 900	11	58	3	.16	3.7
Rhode Island						
Cranston	34, 500	13	.38			
Newport	27, 800			20	.72	
Pawtucket	69, 800			13	19	
Woonsocket	49, 700			15	30	
South Carolina						
Charleston	73, 100			122	1 67	
Greenville	27, 300			17	62	
Spartanburg	25, 500	1	04			
Sumter				13		
South Dakota						
Sioux Falls	30, 100	20	66	20	66	1 0
Tennessee.						
Knoxville	95, 500			89	.93	

Reported Prevalence for the Year 1925—Continued

TUBERCULOSIS (PULMONARY)—Continued

City	Estimated population July 1, 1925	Cases reported, 1925	Cases per 1,000 inhabitants	Deaths registered, 1925	Deaths per 1,000 inhabitants	Cases reported for each death registered
Texas						
Cleburne	14, 200	7	0 49	4	0 28	1 7
Corpus Christi	11, 800	6	.51	3	.25	2 0
Galveston	48, 400			37	76	
Greenville	14, 400			7	.49	
Orange		8		6		1 3
San Angelo				52		
Texarkana	12, 400	3	24	0		
Utah						
Logan		1		1		1.0
Provo	11, 200			2	18	
Vermont						
Barre				18		
Burlington	24, 100			11	46	
Virginia:						
Charlottesville	11, 200			9	80	
Danville	23, 000			16	70	
Lynchburg	30, 400	39	1 28	25	82	1 6
Petersburg	35, 700	76	2.13	45	1 26	1 7
Portsmouth	59, 000	74	1 25	50	85	1 5
Roanoke	58, 200	42	72	35	60	1 2
Suffolk				45		
Washington.						
Aberdeen	16, 200	11	68	11	68	1 0
Bremerton		6		1		6 0
Vancouver	14, 500			4	.28	
Yakima	22, 700	16	70	6	26	2 7
West Virginia:						
Bluefield	19, 300			8	41	
Clarksburg	30, 400	17	56	15	49	1 1
Martinsburg	13, 500			11	81	
Morgantown	13, 800	16	1.16	5	.36	3 2
Parkersburg	21, 300			6	28	
Wheeling		175		38		4 6
Wisconsin.						
Appleton	21, 100	14	66	12	57	1 2
Beloit	24, 800	20	81	8	32	2 5
Green Bay	34, 300	20	58	13	38	1 5
Janesville	20, 800			4	19	
Kenosha	50, 900	46	90	0		
La Crosse	30, 400	36	1 18	20	66	1 8
Manitowoc	22, 100			16	72	
Marinette				12		
Racine	67, 700	80	1 18	24	35	3 3
Superior				22		
Waukesha	14, 700	1	07			
Wausau	20, 100			6	.30	
West Allis	18, 400	28	1 52	8	43	3 5
Wyoming						
Cheyenne	15, 500			4	.26	

TYPHOID FEVER

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Alabama:								
Anniston	20, 500	7	16	42	2 05	1	0.05	2.4
Dothan	14, 500	2	11	4	28	4	.28	100.0
Florence	12, 700	1	11	6	.47	1	.08	16.7
Mobile	66, 000	6	41	33	.50	7	11	21.2
Montgomery	46, 500	5	18	54	1.16	11	.24	20.4
Selma	17, 000	1	11			4	24	
Tuscaloosa	13, 100			16	1.22	1	.08	6 2

Reported Prevalence for the Year 1925—Continued

TYPHOID FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Arizona								
Phoenix	38,700	2	5	7	0 18	0		
Tucson	26,700	5	12	71	2 66	5	0.19	7 0
Arkansas								
Hot Springs		3	6	25				
Little Rock	74,200	7	63	128	1 73	17	.23	13 3
California								
Alameda	31,900	7	3	6	.19	1	.03	16 7
Alhambra		2	10	2		0		
Bakersfield	23,500	6	1	2	09	1	.04	50 0
Berkeley	66,200	7	14	17	26	0		
Chico		2	2	4		1		25 0
Fresno	58,500	5	6	17	.29	1	.02	5 9
Glendale	21,300	4	6	2	09	0		
Long Beach	91,200	7	17	17	19	1	.01	5 9
Modesto		2	3	2		0		
Pasadena	56,700	7	9	10	18	2	04	20 0
Pomona	15,400	5	3	1	06	0		
Riverside		7	9	14		1		7 1
Sacramento	72,300	7	47	44	61	5	07	11 4
San Bernardino	22,800	7	9			4	18	
San Jose	43,600	5	5	6	.14	3	07	50 0
Santa Ana	19,500	3	4	8	41	1	05	12 5
Santa Barbara	24,000	5	5			1	04	
Stockton	47,300	4	58			4	08	
Colorado								
Boulder	11,800	5	7	3	25	0		
Colorado Springs		7	15	23		4		17 4
Pueblo	43,800	4	25	62	1 42	11	.25	17 7
Trinidad	11,000	7	10	10	91	1	.09	10 0
Connecticut								
Danbury		4	9	3		2		66 7
Fairfield	14,500	4	2	3	21	0		
Greenwich	25,300	7	3	2	08	0		
Manchester	21,000	6	3	60	2 86			
Meriden	36,300	5	5	2	06			
Milford	13,500	5	3	2	.15	0		
New Britain	68,000	6	10	12	.18	1	.01	8 3
New London	29,100	7	4	2	07	1	.03	50.0
Norwich	23,100	7	5	9	39	1	04	11 1
Stamford	40,700	2	6	7	.17	1	.02	14.3
Stratford	16,100	4	2	5	.31	0		
Florida								
St Petersburg	26,800	2	6	58	2 16	6	.22	10 3
Tampa	94,700	3	35	52	.55	14	.15	26.9
West Palm Beach		2	3	5		3		60 0
Georgia								
Albany	13,500	4	11	5	.37	0		
Augusta	55,200	5	48	51	92	18	33	35 3
Brunswick	16,800	7	18	12	.71	1	06	8.3
Lagrange	23,500	2	13	18	77	3	.13	16.7
Macon	58,200	7	42	88	1.51	21	.36	23.9
Rome	13,900	5	29	18	1.29	4	.29	22 2
Savannah	93,100	6	58	35	.38	[1] 9	.10	25.7
Idaho								
Boise	23,000	6	5	7	.30	0		
Pocatello	18,300	6	5	6	33	0		
Illinois								
Alton	26,800	6	6			3	.11	
Aurora	40,300	6	18	9	.22	0		
Berwyn	18,900	3	0	2	.11	0		
Bloomington	30,400	5	4	4	.13	1	.03	25 0
Centralia	14,100	6	9	3	.21			
Champaign	18,200	7	6	4	.22	1	.05	25 0
Chicago Heights	22,100	4	1			1	.05	
Cicero	62,200	7	3	2	.03	0		
Danville	37,000	5	5	7	.19	1	.03	14.3
Decatur	53,900	4	18	9	.17	3	.06	33.3
East Moline		2	1	3		0		
East St. Louis	71,400	6	13	4	.06	4	.06	100.0

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

TYPHOID FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Illinois—Continued								
Elgin	33,400	7	6	7	0.21	2	0.06	28 6
Evanston	43,900	7	5	8	18	2	05	25.0
Freeport	20,700	5	1	7	34	1	.05	14.3
Galesburg	24,800	7	16	22	89	4	.16	18 2
Granite City	18,200	4	3			1	05	
Jacksonville	15,900	7	24	35	2.20	1	06	2.9
Joliet	40,600	4	45	22	.54	6	.15	27.3
Kewanee	19,700	4	12	9	46	0		
Maywood	14,200	7	1	1	07	0		
Moline	33,900	7	14	2	.06		.03	50.0
Murphysboro	12,500	3	6	13	1.04	3	.24	23 1
Oak Park	51,400	7	5	5	10	2	04	40 0
Ottawa	11,500	5	1	6	52	0		
Pekin	13,300	7	3	3	.23	0		
Peoria	81,600	6	9	8	.10	1	01	12.5
Quincy		7	14	16		0		
Rock Island	40,000	6	8	9	.22	3	.07	33.3
Rockford	76,500	7	10	19	.25	2	03	10 5
Springfield	63,900	6	16	12	19	4	06	33 3
Waukegan	22,000	4	13	7	.32	0		
Indiana.								
Connersville	12,500	1	2	2	.16	1	08	50 0
East Chicago	45,600	7	10	01	22	3	.07	30 0
Elwood		5	3	10		1		10 0
Fort Wayne	97,800	7	33	76	78	9	09	11 8
Gary	76,900	4	3			3	.04	
Hammond	50,400	5	32	15	30	3	.06	20 0
Huntington	15,900	5	9	23	1 45	1	.06	4.3
Kokomo	36,900	7	11	1	03	0		
LaFayette	23,800	7	7	3	13	2	.08	66 7
Logansport	23,100	7	7	9	39	0		
Michigan City	20,300	4	4	5	25	1	.05	20 0
Mishawaka	16,700	6	4	7	42	0		
Muncie	42,500	6	13	26	61	3	.07	11 5
New Albany		4	3	2		1		50 0
Newcastle	17,000	7	3	7	41	2	.12	28 6
Peru	12,700	2	3	1	08	1	.08	100 0
Richmond	30,500	7	3	5	16	0		
South Bend	80,100	5	11	7	09	1	01	14 3
Terre Haute	71,100	5	7			13	18	
Whiting	12,200	4	2	1	08	0		
Iowa								
Burlington	26,400	6	4	4	.15	1	.04	25 0
Cedar Rapids	50,600	6	2	6	12	2	04	33 3
Clinton	26,400	3	2	1	04	0		
Council Bluffs	39,800			5	13	2	05	40.0
Iowa City	15,300			1	07			
Marshalltown	16,900	3	1	6	36			
Mason City	22,700	6	1	5	22	1	04	20 0
Muscatine	16,800	5	5	2	.12	2	.12	
Ottumwa	26,400			6	23	1	04	100 7
Waterloo	36,800	3	25	6	.16	1	.03	16.7
Kansas.								
Arkansas City	14,000			5	36	0		
Coffeyville	16,200	6	17	25	1 54	1	06	4.0
Emporia	12,200	2	12	22	1 80	5	.41	22.7
Fort Scott	11,800	7	5	5	.42	0		
Hutchinson	26,000	5	13	57	2.19			
Independence	10,900					2	.18	
Lawrence	12,300	7	7	4	.33	3	.24	75 0
Leavenworth	20,900	7	3	3	.14			
Parsons	14,800	4	5	21	1 42	4	.27	19.0
Pittsburg	19,200	6	13	10	.52	2	.10	20.0
Topeka	55,400	6	21	22	.40	1	.02	4.5
Wichita	88,400	7	39	36	.41	4	.05	11.1
Kentucky:								
Covington	58,300	5	21	17	.29	6	.10	35.3
Henderson	12,600	3	5	4	.32	1	.08	25 0
Newport		4	17	16		6		37 5
Paducah	25,900	6	13	32	1.24	6	.23	18.7

Reported Prevalence for the Year 1925—Continued

TYPHOID FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
Louisiana								
Baton Rouge	27,800	5	12	5	0.18	[1] 1	0.04	20.0
Lake Charles	----	3	6	15	----	2	----	13.3
Shreveport	57,900	3	36	127	2.19	[1] 32	.55	25.2
Maine								
Auburn	18,100	6	2	3	.17	0	----	----
Bangor	26,600	5	11	10	.38	2	.08	20.0
Bath	17,800	5	5	1	.06	0	----	----
Biddeford	18,500	5	6	8	.43	[illegible]	.27	62.5
Lewiston	34,900	5	9	6	.17	3	.09	50.0
Portland	75,300	7	34	57	.76	14	.19	24.6
Sanford	11,600	6	2	7	.60	2	.17	28.6
South Portland	----	1	2	3	----	----	----	----
Waterville	14,400	7	5	10	.69	2	.14	20.0
Westbrook	----	----	----	3	----	0	----	----
Massachusetts								
Adams	13,500	7	9	1	.07	1	.07	100.0
Arlington	24,900	7	5	6	.24	0	----	----
Attleboro	20,600	7	3	6	.29	1	.05	16.7
Beverly	22,700	7	5	7	.31	0	----	----
Braintree	13,200	5	1	----	----	1	.08	----
Brockton	65,300	7	9	3	.05	1	.02	33.3
Brookline	42,700	7	5	6	.14	1	.02	16.7
Chelsea	47,200	7	16	13	.28	2	.04	15.4
Chicopee	41,900	7	3	2	.05	0	----	----
Danvers	11,800	7	2	7	.59	0	----	----
Dedham	13,900	5	1	3	.22	2	.14	66.7
Easthampton	11,600	6	0	1	.09	0	----	----
Everett	42,100	7	10	11	.26	0	----	----
Framingham	21,100	7	4	2	.09	0	----	----
Gardner	18,700	7	4	4	.21	0	----	----
Gloucester	23,400	----	----	14	.60	1	.04	7.1
Greenfield	15,200	7	2	3	.20	0	----	----
Haverhill	49,200	7	10	5	.10	0	----	----
Holyoke	60,300	7	6	2	.03	1	.02	50.0
Lawrence	93,500	7	37	23	.25	1	.01	4.3
Leominster	22,100	6	4	2	.09	0	----	----
Malden	51,800	7	11	8	.15	2	.04	25.0
Marlboro	16,200	6	6	3	.19	1	.06	33.3
Medford	47,600	7	6	6	.13	0	----	----
Melrose	20,200	7	3	5	.25	0	----	----
Methuen	20,600	6	2	3	.15	2	.10	66.7
Milford	14,800	7	1	2	.14	0	----	----
Newburyport	15,700	7	8	2	.13	0	----	----
Newton	53,000	7	9	10	.19	1	.02	10.0
North Adams	22,700	7	6	11	.48	1	.04	9.1
Northampton	24,100	7	5	6	.25	0	----	----
Northbridge	10,100	7	2	1	.10	0	----	----
Pittsfield	46,900	7	9	9	.19	2	.04	22.2
Plymouth	13,200	5	6	1	.08	0	----	----
Quincy	60,100	7	9	23	.38	1	.02	4.3
Revere	33,300	1	3	6	.18	0	----	----
Salem	42,800	7	4	3	.07	1	.02	33.3
Saugus	12,700	6	2	2	.16	0	----	----
Somerville	99,000	7	15	13	.13	1	.01	7.7
Southbridge	15,500	7	10	3	.19	0	----	----
Wakefield	15,600	5	4	4	.26	0	----	----
Waltham	34,700	7	10	3	.09	0	----	----
Watertown	25,500	7	3	1	.04	0	----	----
West Springfield	15,300	2	2	1	.07	----	----	----
Westfield	19,300	7	3	3	.16	1	.05	33.3
Winchester	11,600	7	1	2	.17	0	----	----
Winthrop	16,200	7	1	5	.31	0	----	----
Woburn	18,400	7	4	2	.11	0	----	----
Michigan								
Adrian	12,500	3	11	7	.56	0	----	----
Ann Arbor	22,200	7	8	14	.63	2	.09	14.3
Battle Creek	42,300	7	10	22	.52	0	----	----
Bay City	48,900	7	61	21	.43	5	.10	23.8

[1] Includes nonresidents

Reported Prevalence for the Year 1925—Continued

TYPHOID FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Michigan—Continued.								
Benton Harbor	14,000	6	4	2	0 14	2	0.14	100 0
Cadillac	------	4	3	5	------	1	------	20 0
Hamtramck	81,700	5	2	5	06	2	.02	40 0
Highland Park	72,300	7	12	21	.29	3	.04	14.3
Ironwood	17,400	7	3	2	.12	0	------	------
Ishpeming	------	6	1	4	------	1	------	25 0
Jackson	58,000	7	10	14	.24	3	.05	21 4
Kalamazoo	53,600	7	20	20	37	2	.04	10 0
Lansing	70,800	6	24	24	.34	2	03	8 3
Marquette	13,400	6	9	3	.22	0	------	------
Monroe	14,200	3	4	3	21	------	------	------
Muskegon	43,100	6	22	7	.16	1	02	14 3
Muskegon Heights	------	2	2	2	------	0	------	------
Pontiac	47,500	7	12	8	.17	1	02	12 5
Port Huron	30,000	6	9	5	17	1	.03	20 0
River Rouge	------	2	11	7	------	0	------	------
Saginaw	72,100	5	43	82	1.14	12	17	14.6
Sault Ste. Marie	------	7	4	3	------	0	------	------
Minnesota								
Albert Lea	------	1	0	1	------	0	------	------
Faribault	12,300	5	1	1	08	1	.08	100 0
Hibbing	18,000	6	4	1	.06	1	06	100 0
Rochester	17,000	3	6	[1] 8	.47	2	12	25 0
Winona	19,500	6	2	3	.15	------	------	------
Mississippi:								
Biloxi	12,600	4	9	3	.24	0	------	------
Jackson	23,700	2	37	60	2 53	4	17	6 7
Laurel	15,700	------	------	37	2 35	------	------	------
Meridian	24,300	1	15	23	.95	------	------	------
Natchez	13,100	------	------	12	92	1	08	8 5
Missouri:								
Independence	12,700	------	------	7	.55	1	08	14.3
Joplin	------	6	18	8	------	------	------	------
Moberly	13,900	3	6	4	29	1	07	25 0
St Joseph	78,300	7	14	6	08	1	01	16 7
Springfield	42,100	5	22	10	24	5	12	50 0
Montana:								
Anaconda	12,500	6	1	2	16	0	------	------
Great Falls	29,900	7	12	14	47	1	03	28 6
Helena	------	3	1	2	------	0	------	------
Missoula	------	7	3	11	------	1	------	9 1
Nebraska								
Grand Island	15,600	6	5	1	06	------	------	------
Lincoln	60,900	7	10	5	08	2	03	40 0
Nevada								
Reno	12,700	7	11	1	.08	0	------	------
New Hampshire								
Berlin	18,600	4	3	5	.27	0	------	------
Dover	------	6	5	4	------	2	------	50 0
Manchester	83,100	5	17	3	.04	2	02	66 7
Nashua	29,700	3	1	------	------	1	03	------
Portsmouth	14,900	7	4	3	.20	------	------	------
New Jersey:								
Asbury Park	13,700	7	3	10	.73	1	.07	10 0
Bayonne	88,800	6	4	10	11	4	05	40 0
Belleville	18,900	7	2	3	16	0	------	------
Bloomfield	26,000	7	2	3	.12	1	04	33 3
Bridgeton	14,400	6	4	11	.76	3	.21	27 3
Clifton	34,700	5	4	6	.17	0	------	------
Collingswood	------	1	2	2	------	0	------	------
Dover	------	2	0	2	------	0	------	------
East Orange	60,000	7	9	6	.10	0	------	------
Englewood	12,600	7	5	8	.63	0	------	------
Gloucester City	13,700	3	2	3	22	0	------	------
Hackensack	19,700	7	2	11	.56	0	------	------
Harrison	16,400	6	1	1	.06	------	------	------
Hoboken	------	5	7	19	------	2	------	10 5
Irvington	33,200	5	3	7	.21	0	------	------
Kearny	31,300	7	1	5	.16	0	------	------

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

TYPHOID FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy: Number of years	Estimated expectancy: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Fatalities per 100 cases
New Jersey—Continued								
Lodi		1	2	2				
Long Branch	13,600	7	6	7	0.51	0		
Montclair	32,900	7	4	3	.09	1	0.03	33.3
Morristown	12,600	7	6	6	.48	0		
New Brunswick	38,000	7	4	23	.61	5	.13	21.7
Orange	35,400	6	2	4	.11	1	.03	25.0
Passaic	69,000	7	5	4	.06	1	.01	25.0
Perth Amboy	47,100	7	6	10	.21	1	.02	10.0
Phillipsburg	18,600	4	4	4	.22			
Plainfield	31,700	7	7	5	.16	1	.03	20.0
Rahway	12,000	7	6	1	.08	1	.08	100.0
Red Bank		1	1	2				
Ridgefield Park		2	3	2				
Rutherford		2	3	3		0		
Summit	11,700	5	4	8	.68	0		
Union City	63,100			2	.03			
West New York	39,200	7	1	6	.15	0		
New Mexico								
Albuquerque	21,000	2	25	25	1.19	3	.14	12.0
New York								
Amsterdam	35,300	4	6	11	.31	2	.06	18.2
Binghamton	71,900	7	14	13	.18	6	.08	46.2
Cohoes	23,000	6	4	3	.13	1	.04	33.3
Corning	15,700	5	6	10	.64	1	.06	10.0
Cortland	13,900	7	5	6	.43	0		
Dunkirk	19,900	7	3	3	.15	1	.05	33.3
Elmira	48,400	5	15	20	.41	4	.08	20.0
Freeport		1	3	1		0		
Geneva	15,900	6	6	5	.31	1	.06	20.0
Glens Falls	17,900	6	3	6	.34	0		
Gloversville	22,100	7	4	2	.09	0		
Hornell	15,800	6	4	2	.13	0		
Hudson	11,800	5	3	1	.08	0		
Ithaca	18,900	7	11	8	.42	0		
Jamestown	43,400	7	16	5	.12	0		
Johnson City		1	15	5		0		
Johnstown	10,700	4	0	3	.28	0		
Kingston	28,100	6	22	41	1.46	9	.32	22.0
Lackawanna	20,200	7	9	22	1.09	1	.05	4.5
Lockport	21,700	5	6	6	.28	0		
Middletown	20,400	7	3	9	.49	0		
Mount Vernon	50,400	7	6	12	.24	2	.04	1.7
New Rochelle	44,200	6	9	11	.25	1	.02	9.1
Newburgh	30,400	7	12	18	.59	2	.07	11.1
Niagara Falls	57,000	7	15	8	.14	2	.04	25.0
North Tonawanda	17,400	7	13	12	.69	1	.06	8.3
Olean	21,300	7	8	5	.23	1	.05	20.0
Peekskill	18,000	7	2	3	.17	0		
Plattsburg	11,600	6	7			1	.09	
Poughkeepsie	35,700	7	6	16	.45	1	.03	6.2
Rome	30,300	7	8	14	.46	1	.03	7.1
Salamanca		1	0	2		0		
Schenectady	92,800	7	15	20	.22	3	.03	15.0
Troy	72,200	7	26	17	.24	3	.04	17.6
Watertown	32,800	7	22	25	.76	2	.06	8.0
Watervliet	16,200	5	5	1	.06	0		
White Plains	27,400	7	3	10	.36	0		
North Carolina								
Asheville	31,500	7	19	14	.44	1	.03	7.1
Charlotte	53,300	5	26	26	.49	3	.04	7.7
Greensboro	47,100	2	68	21	.45	2	.06	14.3
High Point	23,600	1	28	13	.55	2	.08	15.4
New Bern	12,200	2	8	1	.08	1	.08	100.0
Raleigh	30,400	7	12	17	.56	5	.16	29.4
Rocky Mount	15,100	4	5	14	.26	0		
Salisbury	17,700	3	4	1	.06	0		
Wilmington	37,100	7	27	3	.08	1	.03	33.3
Winston-Salem	69,000	6	59	21	.30	3	.04	14.3

Reported Prevalence for the Year 1925—Continued

TYPHOID FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Ohio								
Alliance	25 000	4	3	1	0 04	0	------	------
Ashtabula	25,100	7	17	27	1 08	6	0 24	22 2
Barberton	23,300	6	7	2	.09	0	------	------
Bellaire	16,300	4	10	2	.12	0	------	------
Bellefontaine	------	------	------	23	------	0	------	------
Bucyrus	11,700	5	15	2	17	1	.09	50 0
Cambridge	14,000	5	6	4	29	1	07	25 0
Chillicothe	16,600	7	11	14	.84	0	------	------
Cleveland Heights	22,200	3	4	1	.05	0	------	------
Conneaut	------	2	2	3	------	0	------	------
Cuyahoga Falls	13,700	2	9	5	.36	1	07	20 0
East Cleveland	37,600	5	5	6	16	0	------	------
East Liverpool	22,000	3	7	1	.05	1	05	100 0
East Youngstown (Campbell)	16,000	5	3	1	.06	0	------	------
Elyria	23,800	7	5	4	17	2	08	50 0
Findlay	18,200	7	2	5	27	0	------	------
Fostoria	------	2	4	5	------	0	------	------
Fremont	13,900	7	14	3	22	0	------	------
Hamilton	42,400	7	7	8	19	6	.14	------
Ironton	14,500	2	6	25	1 72	1	.07	4 0
Kenmore	19,400	3	6	1	05	0	------	------
Lakewood	56,800	4	4	2	04	0	------	------
Lancaster	16,100	4	4	3	19	1	06	33 3
Lima	46,700	7	22	44	94	2	04	4 5
Lorain	42,300	7	15	5	12	0	------	------
Mansfield	31,800	7	12	16	50	1	03	6 2
Marietta	15,300	2	3	------	------	2	.13	------
Marion	32,500	4	20	6	18	3	09	50 0
Martins Ferry	15,500	5	3	12	.77	------	------	------
Middletown	30,800	7	10	13	42	1	03	7 7
Newark	30,500	7	16	5	.16	0	------	------
Niles	16,600	5	3	3	18	0	------	------
Norwood	29,900	7	2	4	13	1	03	25 0
Piqua	16,000	7	12	2	.12	------	------	------
Sandusky	24,500	7	12	64	2 61	8	33	12 5
Springfield	68,700	7	13	11	16	0	------	------
Steubenville	32,000	7	12	12	37	2	06	16 7
Zanesville	30,400	6	10	13	.43	3	10	23 1
Oklahoma								
Ardmore	17,200	1	14	58	3.37	18	1 05	31 0
Guthrie	11,800	------	------	------	------	1	08	------
Okmulgee	25,300	1	15	47	1 86	2	08	4 3
Sapulpa	14,200	1	5	7	.49	0	------	------
Oregon								
Eugene	11,400	7	10	12	1 05	2	18	16 7
Pennsylvania.								
Allentown	92,200	4	52	38	.41	3	03	7 9
Altoona	66,100	7	11	7	11	3	.05	42 9
Beaver Falls	13,100	4	7	7	53	------	------	------
Braddock	21,700	7	8	3	.14	0	------	------
Butler	25,200	7	13	9	36	2	08	22 2
Carbondale	19,500	5	2	6	.31	------	------	------
Clairton	14,600	2	1	2	13	0	------	------
Coatesville	16,700	7	8	1	06	0	------	------
Columbia	------	------	------	5	------	3	------	------
Connellsville	14,300	6	4	9	63	0	------	------
Dubois	11,300	4	3	4	.28	------	------	------
Easton	36,800	6	10	6	16	3	08	50.0
Farrell	18,700	5	5	2	11	1	05	50 0
Greensburg	16,100	1	0	1	06	0	------	------
Harrisburg	83 400	7	19	5	06	0	------	------
Hazleton	36,100	5	5	8	22	2	.06	25 0
Homestead	21,400	7	16	15	70	2	.09	13.3
Jeannette	11,700	5	10	7	60	1	.09	14 3
Lancaster	56,500	7	21	29	.51	9	.16	31.0
Lewistown	------	3	6	7	------	0	------	------
McKees Rocks	18,100	3	0	1	.06	0	------	------
McKeesport	49,100	7	9	[1] 13	26	[1] 8	.16	61 5

[1] Includes nonresidents.

Reported Prevalence for the Year 1925—Continued

TYPHOID FEVER—Continued

City	Estimated population July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Pennsylvania—Continued								
Meadville	15,600	3	3	1	0.06			
Monessen	21,200	6	2	2	.09	0		
New Castle	49,800	6	17	13	.26	3	0.06	23.1
Norristown	34,800	7	11	7	.20	2	.06	28.6
North Braddock	16,700	7	5	2	.12	0		
Oil City	23,300	7	3	6	.26			
Phoenixville		3	1	3				
Pittston	19,800	6	1	1	.05			
Plymouth		6	3	1		0		
Pottstown	18,500	2	4	3	.16	1	.05	33.3
Sharon	25,000	5	8	2	.08	2	.08	100.0
Steelton		7	2	1		0		
Sunbury	16,800	7	3	8	.48	3	.18	37.5
Swissvale	12,900	5	9	4	.31	0		
Uniontown		6	11	12				
Vandergrift		1	1	1		1		100.0
Warren	15,100	7	5	[1] 8	.53	0		
Washington	23,000	7	26	12	.52			
Waynesboro				1				
West Chester		7	4	2		1		50.0
Wilkes-Barre	77,600	2	10	11	.14	1	.01	9.1
Wilkinsburg	27,400	3	8	2	.07	1	.04	50.0
Woodlawn	18,900	5	5	1	.05	1	.05	100.0
York	49,100	6	27	62	1.26	4	.08	6.5
Rhode Island								
Central Falls	25,400	4	2	5	.20			
Cranston	34,500	6	4	2	.06			
Newport	27,800	7	4	5	.18	2	.07	40.0
Pawtucket	69,800	6	8	1	.01	0		
Woonsocket	49,700	1	4	6	.12	2	.04	33.3
South Carolina:								
Anderson	11,100	4	11	9	.81			
Charleston	73,100	1	58	98	1.34	13	.18	13.3
Florence	13,200	1	13	19	1.44	1	.08	5.3
Greenville	27,300	6	17	46	1.68	8	.29	17.4
Spartanburg	25,500	4	13			3	.12	
Sumter		2	15	15		2		13.3
South Dakota								
Aberdeen	15,000	4	1	[1] 1	.07			
Tennessee								
Chattanooga	66,600	4	14	119	1.79			
Knoxville	95,500	6	60	152	1.59	20	.21	13.2
Texas								
Amarillo	17,800	6	12	30	1.69	6	.34	20.0
Beaumont	50,600	4	8	8	.16	4	.08	50.0
Cleburne	14,200	5	10	6	.42	0		
Corpus Christi	11,800	4	1	5	.42	1	.08	20.0
Galveston	48,400	7	32	49	1.01	5	.10	10.2
Greenville	14,400					2	.14	
Orange				16		1		6.2
Palestine	11,400			3	.26			
San Angelo						4		
Texarkana	12,400	5	5	27	2.18	2	.16	7.4
Tyler	13,000	7	6	14	1.08	2	.15	14.3
Waco	43,900	6	15	9	.21	3	.07	33.3
Utah								
Logan		1	5			1		
Ogden	36,900	6	14	6	.16	1	.03	16.7
Vermont								
Bennington		2	2	1		0		
Burlington	24,100	6	3	1	.04	0		
Rutland	15,800	4	4	2	.13	0		
Virginia								
Charlottesville	11,200	4	5	15	1.34	1	.09	6.7
Danville	23,000	7	8	11	.48	5	.22	45.5
Lynchburg	30,400	6	19	36	1.18	3	.10	8.3
Newport News	47,100	6	14	5	.11	2	.04	40.0
Petersburg	35,700	7	25	31	.87	6	.17	19.4
Portsmouth	59,000	7	37	23	.39	4	.07	17.4
Roanoke	58,200	6	36	26	.45	6	.10	23.1
Suffolk				31		0		

[1] Includes nonresidents

Reported Prevalence for the Year 1925—Continued

TYPHOID FEVER—Continued

City	Estimated population, July 1, 1925	Estimated expectancy		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Fatalities per 100 cases
Washington								
Aberdeen	16,200	6	4	3	0 19	2	0 12	66 7
Bremerton		2	2	3		0		
Everett	29,300	7	5	13	44			
Vancouver	14,500	5	4	7	48	1	07	14 3
Walla Walla		3	9	14		0		
Yakima	22,700	7	10	4	18	1	04	25 0
West Virginia								
Bluefield	19,300	4	22	29	1 50	3	.16	10 3
Charleston	49,000	7	49	28	57	2	.04	7 1
Clarksburg	30,400	3	9			10	33	
Fairmont	21,000	7	26	19	.90			
Martinsburg	13,500	5	17	20	1 48	4	30	20
Morgantown	13,800	2	18	55	3.99	4	.29	7 3
Parkersburg	21,300	5	16	3	14	1	05	33 3
Wheeling		4	43	58		8		13 8
Wisconsin								
Appleton	21,100	3	10	1	05	0		
Eau Claire	22,400	7	5	1	04	0		
Fond du Lac	26,000	6	4	4	15	1	04	25 0
Green Bay	34,300	7	7	6	17	2	06	33 3
Kenosha	50,900	7	4	8	16	0		
La Crosse	30,400	7	5	9	30	[1] 1	03	11 1
Madison	46,400	7	1	5	11			
Manitowoc	22,100	5	2	13	59	3	14	23 1
Marinette		7	4	4		0		
Oshkosh	33,200	7	6	6	18	0		
Racine	67,700	6	7	8	12	1	01	12 5
Sheboygan	33,500	6	12	4	12	1	03	25 0
Wausau	20,100	7	8	6	30	1	.05	16 7
Wyoming								
Cheyenne	15,500			10	65	1	.06	10 0

[1] Includes nonresidents.

TYPHUS FEVER

City	Cases reported, 1925	Deaths registered, 1925	City	Cases reported, 1925	Deaths registered, 1925
Georgia			North Carolina		
Augusta	1	0	Wilmington	1	0
Lagrange	5	0	Texas		
Indiana			Palestine	2	
East Chicago		1	Waco	1	0
Massachusetts					
Winthrop	1	0			

Reported Prevalence for the Year 1925—Continued

WHOOPING COUGH

City	Estimated population July 1, 1925	Average, 1922–1924		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Alabama								
Anniston	20,500	3	13	9	0 44	2	0 10	4 5
Dothan	14,500	2	9	31	2.14	1	07	31 0
Florence	12,700	1	10	20	1 57	1	08	20 0
Mobile	66,000					7	11	
Montgomery	46,500	2	45	23	49	0		
Selma	17,000					4	24	
Tuscaloosa	13,100			24	1 83	1	.08	24 0
Arizona								
Phoenix	38,700	2	7	20	.32	6	16	3 3
Tucson	26,700	2	7	10	37	0		
Arkansas								
Hot Springs				4				
Little Rock	74,200	3	17	10	13	3	04	3 3
California								
Alameda	31,900	3	47	131	4 11	1	03	131 0
Alhambra		2	30	86		0		
Bakersfield	23,500	2	4	22	94	0		
Berkeley	66,200	3	159	648	9 79	1	02	648.0
Chico		2	13	3		0		
Eureka	13,500	3	39	5	37	0		
Fresno	58,500	2	32	83	1 42	0		
Glendale	21,300	3	46	116	5.45	0		
Long Beach	91,200	3	81	234	2.57	1	01	234 0
Pasadena	56,700	3	222	410	7 23	7	12	58 6
Pomona	15,400	3	23	34	2.21	0		
Richmond	22,500	3	3	6	27	1	04	6 0
Riverside		3	54	181		2		90 5
Sacramento	72,300	3	68	83	1 15	11	15	7.5
San Bernardino	22,800	3	46	68	2.98	5	.22	13 6
San Jose	43,600	3	51	79	1 81	4	09	19 7
Santa Ana	19,500	3	20	32	1 64	2	10	16.0
Santa Barbara	24,000	1	5	76	3 16	2	.08	38 0
Santa Monica	19,400	2	26			2	10	
Stockton	47,300	3	39	454	9 60	7	.15	64 9
Vallejo	26,600			5	.19	2	.08	2 5
Colorado:								
Boulder	11,800	3	69	26	2.20	0		
Colorado Springs		3	108	28		0		
Pueblo	43,800	3	9	37	84	8	.18	4 6
Trinidad	11,000			27	2.45	3	.27	9 0
Connecticut								
Danbury				4		1		4 0
Fairfield	14,500	3	24	63	4.34	0		
Greenwich	25,300	3	145	90	3.56	0		
Manchester	21,000	3	11	3	14			
Meriden	36,300	3	67	131	3 61			
Milford	13,500	3	26	22	1 63	0		
New Britain	68,000	3	96	41	.60	3	.04	13.7
New London	29,100	3	116	206	7 08	0		
Norwich	23,100	3	15	8	35	1	.04	8 0
Shelton		1	15	7		0		
Stamford	40,700	2	76	88	2.16	2	.05	44 0
Stratford	16,100	2	11	39	2.42	0		
Florida								
St Petersburg	26,800			24	90	0		
Tampa	94,700	3	14	19	20	8	.08	2 4
West Palm Beach		2	5	2		0		
Georgia								
Albany	13,500			2	.15	1	07	2 0
Augusta	55,200	1	2	15	.27	2	.04	7.5
Lagrange	23,500	1	13	7	30	7	.30	1.0
Macon	58,200	3	311	107	1 84	0		
Rome	13,900	3	10	1	07	1	.07	1.0
Savannah	93,100	3	28	64	69	3	.03	21.3
Idaho								
Boise	23,000	2	2	26	1 13	1	.04	26.0
Pocatello	18,300	2	20	10	55	0		

Reported Prevalence for the Year 1925—Continued

WHOOPING COUGH—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924		1925				
		Number of years	Cases	Cases reported	Cases per 1 000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Illinois								
Alton	26,800	3	63	82	3 06	1	0.04	82 0
Aurora	40,300	2	106	117	2 90	1	02	117 0
Berwyn	18,900	3	29	124	6 56	1	05	124 0
Bloomington	30,400	3	100	149	4.90	0		
Blue Island	13 200	3	17	15	1 14	0		
Champaign	18,200	3	46	42	2 31	0		
Chicago Heights	22,100	2	1	6	27	1	05	6 0
Cicero	62,200	3	105	76	1 22	1	02	76 0
Danville	37,000	2	44	58	1 57	0		
Decatur	53,900	2	51	102	1 89	0		
East Moline		2	29	172		3		57 3
East St Louis	71,400	3	32	7	10	1	01	7.0
Elgin	33,400	3	129	30	90	0		
Evanston	43,900	3	308	443	10 09	0		
Freeport	20,700	2	77	97	4.69	0		
Galesburg	24,800	3	115	22	89	0		
Jacksonville	15,900	3	21	116	7 30	0		
Joliet	40,600	1	3	15	37	0		
Kewanee	19,700	2	22	65	3 30	0		
La Salle	13,900	3	15	104	7 48	3	22	34 7
Maywood	14,200	3	46	100	7 04	0		
Moline	33,900	3	87	374	11 03	2	06	187 0
Murphysboro	12,500	2	2	1	08	0		
Oak Park	51,400	3	401	464	9 03	0		
Pekin	13,300	3	19	2	15	0		
Peoria	81,600	3	92	200	2 45	4	05	50 0
Quincy		3	98	11	29	0		
Rock Island	40,000	3	121	251	6 27	0		
Rockford	76,500	3	156	344	4 50	0		
Springfield	63,900	3	208	65	1 02	1	02	65 0
Streator	15,100	3	12	2	13	0		
Waukegan	22,000	2	29	66	3 00	0		
Indiana								
Anderson	33,900	2	68	19	56	1	.03	19 0
Connersville	12,500			30	2 40	1	08	30 0
Crawfordsville	10,500	3	10	2	19	0		
East Chicago	45,600	3	22	5	11	4	09	1 2
Elwood						2		
Fort Wayne	97,800	3	118	76	78	0		
Frankfort	18,100	3	5	1	08	0		
Gary	76,900	1	10	24	31	4	.05	6 0
Hammond	50,400	2	31	22	44	1	.02	22 0
Kokomo	36,900	3	6	5	14	0		
La Fayette	23,800	3	5	7	29	0		
Logansport	23,100			6	26	0		
Michigan City	20,300	3	4	8	39	1	.05	8.0
Mishawaka	16,700	3	13	6	.36	1	06	6 0
Muncie	42,500	3	168	19	.45	0		
Newcastle	17,000	3	4			1	06	
Peru	12,700			1	08	0		
Richmond	30,500	3	3	10	33	0		
South Bend	80,100	3	63	53	.66	0		
Terre Haute	71,100			10	.14	1	01	10 0
Iowa.								
Boone	12,800	1	7	3	23	1	.08	3 0
Burlington	26,400	3	51	29	1 10	0		
Cedar Rapids	50,600			52	1 03	0		
Clinton	26,400	1	14	13	.49	1	04	13.0
Council Bluffs	39,800	3	14	7	18	0		
Dubuque	41,000	3	14	15	.37	0		
Fort Dodge	21,700			2	.09	0		
Iowa City	15,300	3	5	24	1 57			
Marshalltown	16,900	2	25	22	1.30			
Muscatine	16,800	3	28	23	1 37	0		
Waterloo	36,800	2	90	134	3.64	0		

Reported Prevalence for the Year 1925—Continued

WHOOPING COUGH—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Kansas								
Arkansas City	14,000			2	0.14	0		
Coffeyville	16,200	3	31	10	.62	0		
Emporia	12,200	2	9	40	3.28	0		
Fort Scott	11,800	3	14	35	2.97	0		
Hutchinson	26,000	2	25	20	.77			
Lawrence	12,300	3	20	8	.65	0		
Leavenworth	20,900	3	18	19	.91			
Parsons	14,800	3	13	6	.41	0		
Pittsburg	19,200	3	5	9	.47	0		
Topeka	55,400	3	387	186	3.36	0		
Wichita	88,400	3	265	503	5.69	4	0.05	125.7
Kentucky								
Covington	58,300	3	21	16	.27	2	.03	8.0
Newport		2	16	42		2		21.0
Paducah	25,900	3	44	94	3.63	0		
Louisiana								
Baton Rouge	27,800	2	113			3	.11	
Lake Charles		2	10	19		1		19.0
Shreveport	57,900	2	8	11	.19	1	.02	11.0
Maine:								
Auburn	18,100	3	73	20	1.10	0		
Bangor	26,600	3	62	23	.86	0		
Bath	17,800	3	27	13	.73	0		
Biddeford	18,500	3	18	19	1.03	0		
Lewiston	34,900	3	119	17	.49	0		
Portland	75,300	3	153	105	1.39	2	.03	52.5
South Portland		1	2	31				
Waterville	14,400	3	36	40	2.78	0		
Massachusetts:								
Adams	13,500	3	11	13	.96	2	.15	6.5
Amesbury	11,200	2	15	9	.80	0		
Arlington	24,900	3	42	113	4.54	0		
Athol				4		0		
Attleboro	20,600	3	37	32	1.55	0		
Belmont	15,300	3	93	69	4.51	0		
Beverly	22,700	3	30	28	1.23	1	.04	28.0
Braintree	13,200	3	41	24	1.82	0		
Brockton	65,300	3	187	188	2.88	0		
Brookline	42,700	3	177	49	1.15	0		
Chelsea	47,200	3	48	97	2.06	1	.02	97.0
Chicopee	41,900	3	18	14	.33	1	.02	14.0
Clinton	14,200	3	13	8	.56	0		
Danvers	11,800	3	10	6	.51	0		
Dedham	13,900	3	14	29	2.09	0		
Easthampton	11,600	3	6	1	.09	0		
Everett	42,100	3	95	86	2.04	3	.07	28.7
Framingham	21,100	3	41	70	3.32	0		
Gardner	18,700	3	20	50	2.67	3	.16	16.7
Gloucester	23,400			3	.13	0		
Greenfield	15,200	3	51	103	6.78	0		
Haverhill	49,200	3	149	98	1.99	1	.02	98.0
Holyoke	60,300	3	62	69	1.14	3	.05	69.0
Lawrence	93,500	3	173	175	1.87	4	.04	43.7
Leominster	22,100	3	39	2	.09	0		
Malden	51,800	3	78	86	1.66	0		
Marlboro	16,200	2	25	8	.49	0		
Medford	47,600	3	65	104	2.18	0		
Melrose	20,200	3	31	49	2.43	2	.10	24.5
Methuen	20,600	3	82	97	4.71	1	.05	97.0
Milford	14,800	3	10	16	1.06	1	.07	16.0
Milton		1	6	44		2		22.0
Newburyport	15,700	3	30	6	.38	0		
Newton	53,000	3	319	326	6.15	0		
North Adams	22,700	3	7	6	.26	1	.04	6.0
Northampton	24,100	3	34	15	.62	0		
Northbridge	10,100	3	16	35	3.47	0		
Palmer		2	2	2		0		
Peabody	19,900	3	26	13	.65	0		

Reported Prevalence for the Year 1925—Continued

WHOOPING COUGH—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
Massachusetts—Continued								
Pittsfield	46,900	3	41	46	0.98	4	0.09	11.5
Plymouth	13,200	2	25	7	.53	0		
Quincy	60,100	3	165	194	3.23	3	.05	64.7
Revere	33,300			23	.69	1	.03	23.0
Salem	42,800	3	68	36	.84	3	.07	12.0
Saugus	12,700	3	28	20	1.57	0		
Somerville	99,000	3	69	184	1.86	5	.05	36.8
Taunton	39,300	3	29	4	.10	0		
Wakefield	15,600	3	16	12	.77	1	.06	12.0
Waltham	34,700	3	82	36	1.04	0		
Watertown	25,500	3	57	77	3.02	0		
West Springfield	15,300	2	20	11	.72			
Westfield	19,300	3	11	3	.16	0		
Winchester	11,600	3	32	37	3.19	0		
Winthrop	16,200	3	68	79	4.88	0		
Woburn	18,400	3	21	13	.71	0		
Michigan								
Adrian	12,500	2	12	20	1.60	0		
Ann Arbor	22,200	3	48	81	3.65	1	.05	81.0
Battle Creek	42,300	3	104	62	1.47	0		
Bay City	48,900	3	84	102	2.09	1	.02	102.0
Benton Harbor	14,000	3	7	10	.71	0		
Hamtramck	81,700	3	24	17	.21	1	.01	17.0
Highland Park	72,300	3	175	276	3.82	0		
Holland	13,100	3	41	27	2.06	0		
Ironwood	17,400	3	24	19	1.09	1	.06	19.0
Ishpeming		3	7	2		0		
Jackson	58,000	3	137	289	4.98	4	.07	72.2
Kalamazoo	53,600	3	183	212	3.96	3	.06	70.7
Lansing	70,800	3	209	359	5.07	2	.03	179.5
Marquette	13,400	2	20	112	8.36	0		
Monroe	14,200			5	.35			
Muskegon	43,100	3	38	85	1.97	2	.05	42.5
Muskegon Heights		2	15	75		0		
Pontiac	47,500	3	166	124	2.61	2	.04	62.0
Port Huron	30,000	3	126	208	6.93	1	.03	208.0
River Rouge		2	3	2		1		2.0
Saginaw	72,100	3	145	107	1.48	4	.06	26.8
Sault Ste. Marie		3	9	22		0		
Minnesota								
Albert Lea				4		0		
Austin	11,900			6	.50			
Brainerd				1		0		
Faribault	12,300	3	2	1	.08	0		
Hibbing	18,000			6	.33	0		
Rochester	17,000	2	9	119	7.00	0		
Winona	19,500	3	82	3	.15			
Mississippi								
Biloxi	12,600	3	11	11	.87	0		
Jackson	23,700	2	127	173	7.30	0		
Laurel	15,700			71	4.52			
Meridian	24,300	1	126	95	3.91			
Natchez	13,100			40	3.05	0		
Missouri								
Independence	12,700	2	28	40	3.15	0		
Moberly	13,900	3	13			1	.07	
St. Joseph	78,300	3	43	45	.57	5	.06	9.0
Springfield	42,100	2	15	5	.12	3	.07	1.7
Montana:								
Anaconda	12,500			11	.88	0		
Butte	42,900	3	0			3	.07	
Great Falls	29,900	3	45	157	5.25	1	.03	157.0
Helena		2	1	27		1		27.0
Missoula		1	9	14		4		3.5
Nebraska:								
Grand Island	15,600	3	1	22	1.41			
Lincoln	60,900	3	200	363	5.96	3	.05	121.0
North Platte	13,700	1	14	3	.22	0		

Reported Prevalence for the Year 1925—Continued

WHOOPING COUGH—Continued

City	Estimated population, July 1, 1925	Average, 1922-1924		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
Nevada								
Reno	12,700	3	9	2	0.16	0		
New Hampshire								
Concord	22,500	3	5	28	1.24	0		
Dover		3	20	2		0		
Keene	11,900	3	5	10	.84	0		
Manchester	83,100	2	19	11	.13	8	0.10	1.4
Nashua	29,700	3	5			5	.17	
Portsmouth	14,900	3	56	75	5.03	2	.13	37.5
New Jersey								
Asbury Park	13,700	3	33	72	5.26	0		
Bayonne	88,800	2	20			8	.09	
Belleville	18,900	3	33	115	6.08			
Bloomfield	26,000	3	130	144	5.54	0		
Bridgeton	14,400	3	2	26	1.81	3	.21	8.7
Clifton	34,700	3	26	11	.32	0		
Collingswood		1	33	5		0		
Dover		2	56	93		1		93.0
East Orange	60,000	3	324	542	9.03	3	.05	542.0
Englewood	12,600	3	93	36	2.86	0		
Garfield	24,600	2	12	4	.16	0		
Gloucester City	13,700	2	9	6	.44	0		
Hackensack	19,700	3	62	44	2.23	0		
Harrison	16,100	3	26	52	3.17			
Hoboken		3	19	14		0		
Irvington	33,200	2	141	212	6.39	1	.03	212.0
Kearny	31,300	3	141	112	3.58	0		
Lodi		1	14	4		0		
Long Branch	13,600	3	49	149	10.96	0		
Montclair	32,900	3	112	330	10.03	0		
Morristown	12,600	3	25	90	7.14	0		
New Brunswick	38,000	3	0	1	.03	0		
Nutley				11		0		
Orange	35,400	3	189	153	4.32	1	.03	153.0
Passaic	69,000	3	95	60	.87	3	.04	20.0
Perth Amboy	47,100	3	11	9	.19	4	.08	2.2
Plainfield	31,700	3	58	185	5.84	5	.16	37.0
Rahway	12,000	3	6	7	.58	0		
Red Bank		1	18	7		0		
Ridgefield Park		2	23	10		0		
Rutherford		2	38	104		0		
Summit	11,700	3	77	9	.77	0		
Union City	63,100			7	.11			
West New York	39,200	3	4	2	.05	0		
West Orange	18,200	3	102	174	9.56	0		
New Mexico								
Albuquerque	21,000			22	1.05	0		
New York								
Amsterdam	35,300	3	91	20	.57	0		
Binghamton	71,900	3	330	244	3.39	3	.04	81.3
Cohoes	23,000	3	17	28	1.22	0		
Corning	15,700	2	55	6	.38	0		
Cortland	13,900	3	12	26	1.87	0		
Dunkirk	19,900	3	65	6	.30	0		
Elmira	48,400	2	188	143	2.95	0		
Freeport		1	40	10		0		
Geneva	15,900	2	25	12	.75	0		
Glens Falls	17,900	3	52	34	1.90	0		
Gloversville	22,100	3	44	61	2.76	0		
Hornell	15,800	3	139	309	19.56	2	.13	154.5
Hudson	11,800	3	34	13	1.10	0		
Ilion	10,400	1	15	72	6.92	0		
Ithaca	18,900	3	120	18	.95	0		
Jamestown	43,400	3	233	489	11.27	1	.02	489.0
Johnson City		1	9	47		0		
Johnstown	10,700			17	1.59	0		
Kingston	28,100	2	53	21	.75	0		
Lackawanna	20,200	3	69	68	3.37	0		

Reported Prevalence for the Year 1925—Continued

WHOOPING COUGH—Continued

City	Estimated population, July 1, 1925	Average, 1922-1924		1925				
		Number of years	Cases	Cases reported	Cases per 1,000 inhabitants	Deaths registered	Deaths per 1,000 inhabitants	Cases reported for each death registered
New York—Continued.								
Little Falls	12,400	3	19	20	1 61	0		
Lockport	21,700	3	42	18	83	0		
Middletown	20,400	3	79	50	2.45	0		
Mount Vernon	50,400	3	147	64	1 27	1	0 02	64 0
New Rochelle	44,200	3	90	42	95	0		
Newburgh	30,400	3	27	19	62	0		
Niagara Falls	57,000	3	121	19	33	0		
North Tonawanda	17,400	3	30	3	17	0		
Olean	21,300	3	174	19	89	0		
Peekskill	18,000	3	58	2	11	0		
Plattsburg	11,600	3	33			2	.17	
Poughkeepsie	35,700	3	97	17	.48	0		
Rensselaer	11,400	3	16	5	44	0		
Rome	30,300	3	23	2	.07	0		
Salamanca		1	46	2		0		
Saratoga Springs	13,900	3	76	67	4 82	0		
Schenectady	92,800	3	296	276	2 97	2	02	138 0
Troy	72,200	3	81	93	1 29	0		
Watertown	32,800	3	156	222	6 77	0		
Watervliet	16,200	3	18	3	19	0		
White Plains	27,400	3	128	121	4.42	0		
North Carolina:								
Asheville	31,500	3	111	49	1 56	0		
Charlotte	53,300	1	705	34	64	1	02	34 0
Greensboro	47,100	3	232	86	1 83	4	08	21 5
High Point	23,600	1	229	24	1 02	1	04	24 0
New Bern	12,200	2	47	4	33	0		
Raleigh	30,400	3	244	62	2 04	1	03	62 0
Rocky Mount	15,100	2	275	10	66	0		
Salisbury	17,700	1	240	5	28	0		
Wilmington	37,100	3	215	72	1 94	3	08	24 0
Winston-Salem	69,000	3	346	322	4 67	12	17	25 8
North Dakota								
Fargo	24,900			262	10 52	0		
Ohio								
Alliance	25,000	2	24	8	32	0		
Ashtabula	25,100	3	52	9	36	0		
Barberton	23,300	2	8	9	.39	0		
Bellaire	16,300	3	37	5	31	0		
Bellefontaine				8		0		
Bucyrus	11,700	3	31	31	2.65	1	.09	31 0
Cambridge	14,000	3	13	4	29	3	21	1 3
Chillicothe	16,600	3	8	7	42	0		
Cleveland Heights	22,200	3	158	213	9 59	0		
Conneaut		2	14	21		0		
Cuyahoga Falls	13,700	3	34	54	3 94	2	.15	27 0
East Cleveland	37,600	3	118	115	3 06	0		
East Youngstown (Campbell)	16,000	3	20	4	25	0		
Elyria	23,800	3	78	33	1 39	0		
Findlay	18,200	3	99	23	1 26	0		
Fostoria		1	2	3		0		
Hamilton	42,400	2	6	7	17	0		
Ironton	14,500	1	2	13	90	1	07	13 0
Kenmore	19,400	3	97	98	5 05	1	05	98 0
Lakewood	56,800	2	87	40	.70	0		
Lima	46,700	3	37	44	.94	2	04	22 0
Lorain	42,300	3	158	55	1.30	0		
Mansfield	31,800	3	119	210	6.60	0		
Marietta	15,300	1	74	7	.46	0		
Marion	32,500					4	12	
Middletown	30,800					4	13	
Newark	30,500	3	71	35	1 15	1	03	35.0
Niles	16,800	3	24	20	1 20	2	.12	10 0
Norwood	29,900	3	55	45	1 51	0		
Salem	11,100	3	88	37	3.33	0		
Sandusky	24,500	3	70	10	.41	0		

Reported Prevalence for the Year 1925—Continued

WHOOPING COUGH—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
Ohio—Continued.								
Springfield	68,700	3	109	297	4.32	3	0.04	99.0
Steubenville	32,000	2	16	5	.16	2	.06	2.5
Zanesville	30,400	3	9	3	.10	1	.03	3.0
Oklahoma:								
Ardmore	17,200	1	30	20	1.16	2	.12	10.0
Okmulgee	25,300			36	1.42	0		
Sapulpa	14,200	1	20	1	.07	0		
Oregon:								
Eugene	11,400	2	6	18	1.58	0		
Pennsylvania:								
Allentown	92,200	2	178	196	2.13	5	.05	39.2
Altoona	66,100	3	76	39	.59	0		
Beaver Falls	13,100	3	11	7	.53			
Braddock	21,700	3	48	7	.32	0		
Bradford	15,800	2	82	72	4.56	0		
Butler	25,200	3	53	96	3.81	1	.04	96.0
Canonsburg	13,500	2	2			2	.15	
Carlisle	11,400	3	49	14	1.23			
Carnegie	12,400	3	18	34	2.74	3	.24	11.3
Carrick	13,000	2	17	17	1.31			
Chambersburg	13,900	2	6	22	1.58	0		
Charleroi	12,600	2	12	27	2.14			
Clairton	14,900	2	20	20	1.34	0		
Coatesville	16,500	3	18	29	1.76	2	.12	14.5
Columbia				4				
Connellsville	14,300	3	9	7	.49	0		
Dubois	14,300	2	17	13	.91			
Duquesne	20,900	2	11	3	.14	1	.05	3.0
Easton	36,800	2	85	65	1.77	3	.08	21.7
Farrell	18,700	3	37	3	.16	0		
Greensburg	16,100	1	7	6	.37	0		
Harrisburg	83,400	3	188	180	2.16	0		
Hazleton	36,100	3	28	31	.86	0		
Homestead	21,400	3	31	9	.42	0		
Jeannette	11,700	3	5	2	.17	0		
Kingston	18,000	2	39	88	4.89	1	.06	88.0
Lancaster	56,500	3	139	151	2.67	0		
Latrobe				35		1		35.0
Lewistown		2	15	23		0		
McKees Rocks	18,100	2	21	18	.99	0		
McKeesport	49,100	3	48	33	.67	0		
Meadville	15,600			7	.45			
Monessen	21,200	3	43	6	.28	0		
New Castle	49,800	3	44	9	.18	4	.08	2.2
Norristown	34,800	3	77	223	6.41	5	.14	44.6
North Braddock	16,700	3	43	8	.48	0		
Oil City	23,300	3	175	131	5.62			
Olyphant	11,200	1	2	3	.27	2	.18	1.5
Phoenixville		3	32	75				
Pittston	19,800	2	6	4	.20			
Plymouth		1	18	2		0		
Pottstown	18,500	2	30	32	1.73	1	.05	32.0
Sharon	25,000	3	23	9	.36	0		
Steelton		3	19	2		0		
Sunbury	16,800	3	32	57	3.39	1	.06	57.0
Swissvale	12,900	3	49	19	1.47	1	.08	19.0
Uniontown		3	19	33		0		
Vandergrift		1	6	6		0		
Warren	15,100	3	40	102	6.75	2	.13	51.0
Washington	23,000	3	79	193	8.39			
Waynesboro				19				
West Chester		3	34	31		2		15.5
Wilkes-Barre	77,600	1	43	265	3.41	6	.08	44.2
Wilkinsburg	27,400	1	91	53	1.93	1	.04	53.0
Windber		1	9	35		1		35.0
Woodlawn	18,900	3	25	35	1.85	0		
York	49,100	2	45	61	1.24	0		

Reported Prevalence for the Year 1925—Continued

WHOOPING COUGH—Continued

City	Estimated population, July 1, 1925	Average, 1922–1924: Number of years	Average, 1922–1924: Cases	1925: Cases reported	1925: Cases per 1,000 inhabitants	1925: Deaths registered	1925: Deaths per 1,000 inhabitants	1925: Cases reported for each death registered
Rhode Island								
Cranston	34, 500	3	8	1	0 03	1	0 03	1 0
Pawtucket	69, 800			64	92	1	01	64 0
Woonsocket	49, 700					3	.06	
South Carolina								
Charleston	73, 100	1	38	17	23	4	.05	4 2
Greenville	27, 300	3	102	59	2 16	1	.04	59 0
Spartanburg	25, 500	2	8	22	86	1	04	22.0
Sumter		2	6	26		0		
South Dakota								
Aberdeen	15, 000	3	31	46	3 07			
Tennessee								
Chattanooga	66, 600			24	36			
Knoxville	95, 500			35	37	12	13	2 9
Texas:								
Cleburne	14, 200			70	4 93	0		
Corpus Christi	11, 800	2	10	30	2 54	0		
Galveston	48, 400	3	0	1	.02	0		
Palestine	11, 400			37	3 25			
San Angelo						2		
Waco	43, 900			6	.14	0		
Utah.								
Ogden	36, 900	3	117	74	2 01	0		
Provo	11, 200	2	16	81	7 23	0		
Vermont								
Barre		3	34	14		1		14.0
Bennington		2	99	15		0		
Burlington	24, 100	3	97	16	66	0		
Rutland	15, 800	1	30	124	7.85	2	.13	62 0
Virginia								
Alexandria	18, 500	3	12	9	.49	0		
Charlottesville	11, 200	2	7	1	09	1	09	1.0
Danville	23, 000	3	41	4	17	0		
Lynchburg	30, 400	3	243	180	5 92	6	.20	30 0
Newport News	47, 100	3	129	338	7 18	3	06	112.7
Petersburg	35, 700	3	62	26	73	1	03	26 0
Portsmouth	59, 000					4	.07	
Roanoke	58, 200	2	65	62	1 07	8	14	7 8
Suffolk				4		0		
Washington:								
Aberdeen	16, 200			3	19	0		
Bremerton		2	62	68		1		68 0
Everett	29, 300	3	23	68	2 32	0		
Vancouver	14, 500	2	1	45	3 10	1	07	45 0
Walla Walla		3	5	15		0		
Yakima	22, 700	3	103	118	5 20	0		
West Virginia								
Bluefield	19, 300	1	1	4	21	0		
Charleston	49, 000	3	63	77	1 57	1	.02	77.0
Clarksburg	30, 400	3	259	302	9 93	5	.16	60 4
Fairmont	21, 000	3	31	48	2.29			
Morgantown	13, 800	1	12	16	1 16	1	.07	16 0
Wheeling		3	61	41		6		6 8
Wisconsin								
Appleton	21, 100	3	33	26	1 23	0		
Beloit	24, 800	3	112	193	7 78	0		
Eau Claire	22, 400	3	63	12	54	0		
Green Bay	31, 300	3	30	127	3 70	1	.03	127 0
Janesville	20, 800	3	79	72	3 46	0		
Kenosha	50, 900	3	258	246	4.83	1	02	246 0
La Crosse	30, 400	3	110	93	3 06	0		
Madison	46, 400	3	274	307	6.62			
Manitowoc	22, 100	2	43	6	27	0		
Marinette				21		0		
Oshkosh	33, 200	3	53	52	1 57	0		
Racine	67, 700	3	208	228	3 37	3	04	76 0
Sheboygan	33, 500	3	15	56	1.67	2	06	28 0
Superior		2	11	19		1		19.0
Waukesha	14, 700	1	5	9	61	0		
Wausau	20, 100	3	78	118	5 87	1	.05	118 0
West Allis	18, 400	3	25	45	2 45	0		
Wyoming:								
Cheyenne	15, 500			8	.52	0		

DEATHS DURING WEEK ENDED OCTOBER 2, 1926

Summary of information received by telegraph from industrial insurance companies for week ended October 2, 1926, and corresponding week of 1925 (From the Weekly Health Index, October 6, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Oct 2, 1926	Corresponding week, 1925
Policies in force	65, 147, 117	61, 172, 480
Number of death claims	11, 041	10, 164
Death claims per 1,000 policies in force, annual rate	8 8	8 7

Deaths from all causes in certain large cities of the United States during the week ended October 2, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, October 6, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Oct 2, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Oct 2, 1926 [2]
	Total deaths	Death rate [1]		Week ended Oct 2, 1926	Corresponding week, 1925	
Total (66 cities)	6,127	11 0	10 9	838	878	[3] 67
Akron	37			10	11	108
Albany [4]	25	11 0	15 5	3	1	62
Atlanta	69			13	8	
White	39			8		
Colored	30	(5)		5		
Baltimore [4]	195	12 6	12 2	35	38	107
White	140			25		94
Colored	55	(5)		10		159
Birmingham	58	14 3	16 5	14	14	
White	24			4		
Colored	34	(5)		10		
Boston	176	11 7	13 2	28	44	78
Bridgeport	22			4	2	68
Buffalo	143	13.7	13 7	20	20	84
Cambridge	16	6.8	10 5	1	3	18
Camden	26	10.3	16 2	9	13	151
Canton	17	8 1	8 3	·2	5	44
Chicago [4]	587	10.0	9 3	75	91	66
Cincinnati	100	12.7	13 0	8	7	50
Cleveland	169	9.2	10 9	28	29	73
Columbus	75	13 7	11 9	19	7	178
Dallas	41	10.7	11.1	16	16	
White	34			15		
Colored	7	(5)		1		
Dayton	48	14.1	9 9	7	3	115
Denver	77	14.1	11 1	7	9	
Des Moines	28	10 0	11 4	1	2	17
Detroit	269	10 9	10 7	50	54	81
Duluth	19	8 8	9 0	2	5	46
El Paso	19	9 1	14.4	2	2	
Erie	29			7	3	137
Fall River [4]	30	11 9	9 3	6	5	94
Flint	21	8 0	10 0	6	6	102
Fort Worth	22	7.2	8 9	4	3	
White	18			4		
Colored	4	(5)		0		
Grand Rapids	28	9.4	10 9	3	10	43
Houston	53			9	7	
White	27			6		
Colored	26	(5)		3		
Indianapolis	83	11 8	9 7	10	9	76
White	75			10		87
Colored	8	(5)		0		0
Jersey City	60	9.8	8.4	10	7	76
Kansas City, Kans	32	14.3	12.6	5	2	97
White	22			4		89
Colored	10	(5)		1		152
Kansas City, Mo	84	11.7	12.9	21	7	
Los Angeles	201			12	14	33
Louisville	82	13.7	13 6	9	6	77
White	69			7		68
Colored	13	(5)		2		140

Footnotes at end of table

Deaths from all causes in certain large cities of the United States during the week ended October 2, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, October 6, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Oct 2, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Oct 2, 1926 [2]
	Total deaths	Death rate [1]		Week ended Oct 2, 1926	Corresponding week, 1925	
Lowell	34			3	5	58
Lynn	13	6.5	15.7	2	2	53
Memphis	52	15.3	13.7	8	5	
White	25			6		
Colored	27	(5)		2		
Milwaukee	85	8.6	10.5	21	21	99
Minneapolis	88	10.6	8.2	9	10	50
Nashville [4]	49	18.6	15.7	6	9	
White	26			5		
Colored	23	(5)		1		
New Bedford	18			3	2	52
New Haven	38	10.9	11.1	2	5	27
New Orleans	133	16.6	15.6	18	14	
White	74			7		
Colored	59	(5)		11		
New York	1,145	10.1	9.8	144	129	59
Bronx Borough	146	8.5	8.5	20	10	67
Brooklyn Borough	395	9.2	8.1	54	48	55
Manhattan Borough	486	13.5	13.0	61	59	68
Queens Borough	82	5.6	7.4	9	10	41
Richmond Borough	36	13.1	13.6	0	2	0
Newark, N J	83	9.4	8.6	9	15	43
Norfolk	36	10.8	7.4	5	5	101
White	12			1		33
Colored	24	(5)		4		212
Oakland	55	11.0	7.8	3	2	35
Oklahoma City	14			1	3	
Omaha	55	13.3	11.6	6	6	64
Paterson	31	11.3	8.8	7	4	118
Philadelphia	425	11.0	11.2	53	59	71
Pittsburgh	136	11.1	14.0	17	22	56
Portland, Oreg	62			5	2	50
Providence	63	11.9	7.6	13	3	108
Richmond	48	13.2	14.0	8	8	100
White	29			5		97
Colored	19	(5)		3		104
Rochester	80	13.0	11.0	8	5	63
St Louis	190	11.9	10.6	20	12	
St. Paul	40	8.4	11.4	5	6	44
Salt Lake City [4]	29	11.4	11.1	4	3	61
San Antonio	33	8.4	11.8	3	9	
San Diego	32	15.2	11.8	2	2	42
San Francisco	126	11.6	10.2	4	4	24
Schenectady	16	9.0	9.6	1	4	29
Seattle	62			5	1	48
Somerville	17	8.9	10.0	0	3	0
Spokane	26	12.4	15.3	1	3	23
Springfield, Mass	22	7.9	10.3	0	5	0
Syracuse	45	12.8	11.2	3	7	38
Tacoma	23	11.3	12.0	1	1	24
Toledo	79	14.0	12.7	10	14	96
Trenton	36	14.0	11.1	4	4	68
Utica	34	17.2	13.3	4	5	91
Washington, D C	123	12.1	12.3	24	25	137
White	79			12		100
Colored	44	(5)		12		219
Waterbury	11			1	4	24
Wilmington, Del	18	7.6	10.7	3	6	67
Worcester	44	11.9	12.0	2	7	24
Yonkers	16	7.2	9.6	1	5	23
Youngstown	33	10.4	13.0	6	11	76

[1] Annual rate per 1,000 population
[2] Death under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 64 cities.
[4] Deaths for week ended Friday, Oct 1, 1926.
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Kansas City, Kans 14, Louisville 17, Memphis 38, Nashville 30, New Orleans [illegible], Norfolk 38, Richmond 32, and Washington, D. C. 25

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended October 9, 1926

ALABAMA	Cases
Chicken pox	1
Diphtheria	41
Influenza	25
Malaria	127
Measles	6
Mumps	4
Ophthalmia neonatorum	1
Pellagra	7
Pneumonia	22
Scarlet fever	13
Tuberculosis	33
Typhoid fever	63
Whooping cough	6

ARKANSAS	
Cerebrospinal meningitis	1
Chicken pox	13
Diphtheria	14
Hookworm disease	1
Influenza	18
Malaria	125
Mumps	8
Pellagra	11
Poliomyelitis	1
Scarlet fever	5
Tuberculosis	5
Typhoid fever	24
Whooping cough	25

COLORADO	
Chicken pox	8
Diphtheria	18
Measles	3
Mumps	2
Paratyphoid fever	1
Pneumonia	2
Scarlet fever	25
Septic sore throat	1
Tuberculosis	21
Typhoid fever	8
Vincent's angina	2
Whooping cough	3

CONNECTICUT	Cases
Cerebrospinal meningitis	1
Chicken pox	9
Conjunctivitis (infectious)	1
Diphtheria	17
German measles	1
Influenza	5
Malaria	1
Measles	20
Mumps	1
Pneumonia (broncho)	7
Pneumonia (lobar)	12
Poliomyelitis	1
Scarlet fever	28
Tetanus	1
Tuberculosis (all forms)	24
Typhoid fever	4
Whooping cough	22

DELAWARE	
Diphtheria	4
Poliomyelitis	2
Scarlet fever	8
Tuberculosis	1
Typhoid fever	4
Whooping cough	1

FLORIDA	
Diphtheria	19
Influenza	4
Malaria	7
Measles	1
Mumps	1
Pneumonia	6
Scarlet fever	5
Smallpox	4
Tetanus	1
Tuberculosis	21
Typhoid fever	11
Vincent's angina	1

GEORGIA	
Cerebrospinal meningitis	1
Conjunctivitis (acute)	2

GEORGIA—continued

	Cases
Diphtheria	46
Dysentery	3
Hookworm disease	2
Influenza	26
Malaria	83
Measles	3
Mumps	2
Paratyphoid fever	2
Pellagra	4
Pneumonia	12
Scarlet fever	22
Septic sore throat	20
Smallpox	3
Trachoma	1
Tuberculosis	15
Typhoid fever	46
Typhus fever	1
Whooping cough	12

IDAHO

Cerebrospinal meningitis—Shoshone County	2
Chicken pox	6
Diphtheria	6
Influenza	2
Measles	4
Mumps	5
Scarlet fever	6
Tuberculosis	5
Typhoid fever	3
Whooping cough	1

ILLINOIS

Cerebrospinal meningitis—Rock Island County	1
Chicken pox	63
Diphtheria	88
Influenza	12
Lethargic encephalitis:	
Alexander County	1
Cook County	2
Measles	78
Mumps	23
Pneumonia	103
Poliomyelitis:	
Cook County	4
Lawrence County	1
Richland County	1
Winnebago County	1
Scarlet fever	168
Smallpox	1
Tuberculosis	307
Typhoid fever	104
Whooping cough	161

INDIANA

Cerebrospinal meningitis	2
Chicken pox	21
Diphtheria	65
Influenza	16
Measles	20
Pneumonia	2
Poliomyelitis	3
Scarlet fever	62
Smallpox	2
Tuberculosis	44
Typhoid fever	71
Whooping cough	46

IOWA

	Cases
Chicken pox	6
Diphtheria	26
German measles	1
Measles	4
Mumps	2
Scarlet fever	32
Smallpox	1
Tuberculosis	10
Typhoid fever	9
Whooping cough	1

KANSAS

Chicken pox	17
Diphtheria	20
German measles	1
Influenza	2
Measles	6
Mumps	1
Pneumonia	8
Poliomyelitis	
Dighton	1
Horton	1
Hutchinson	2
Scarlet fever	40
Smallpox	4
Tuberculosis	19
Typhoid fever	18
Whooping cough	29

LOUISIANA

Diphtheria	22
Hookworm disease	76
Influenza	23
Malaria	32
Pneumonia	16
Scarlet fever	5
Smallpox	2
Tuberculosis	47
Typhoid fever	27
Whooping cough	4

MARYLAND [1]

Cerebrospinal meningitis	1
Chicken pox	11
Diphtheria	20
Dysentery	4
Influenza	7
Lethargic encephalitis	1
Malaria	1
Measles	5
Mumps	2
Paratyphoid fever	2
Pneumonia (broncho)	15
Pneumonia (lobar)	9
Poliomyelitis	2
Scarlet fever	30
Tuberculosis	53
Typhoid fever	39
Whooping cough	82

MASSACHUSETTS

Cerebrospinal meningitis	3
Chicken pox	44
Conjunctivitis (suppurative)	6
Diphtheria	62
German measles	9
Influenza	18

[1] Week ended Friday.

MASSACHUSETTS—continued	Cases
Lethargic encephalitis	2
Malaria	1
Measles	15
Mumps	64
Ophthalmia neonatorum	28
Pneumonia (lobar)	44
Poliomyelitis	6
Scarlet fever	143
Tuberculosis (pulmonary)	115
Tuberculosis (other forms)	25
Typhoid fever	35
Whooping cough	70

MICHIGAN

Diphtheria	153
Measles	24
Pneumonia	36
Scarlet fever	153
Smallpox	7
Tuberculosis	73
Typhoid fever	24
Whooping cough	88

MINNESOTA

Chicken pox	38
Diphtheria	48
Influenza	1
Measles	26
Poliomyelitis	3
Scarlet fever	144
Smallpox	1
Tuberculosis	38
Typhoid fever	6
Whooping cough	28

MISSISSIPPI

Diphtheria	33
Scarlet fever	15
Smallpox	5
Typhoid fever	40

MISSOURI

(Exclusive of Kansas City)

Chicken pox	6
Diphtheria	24
Influenza	2
Malaria	3
Measles	8
Mumps	2
Poliomyelitis	2
Scarlet fever	41
Tetanus	2
Trachoma	1
Tuberculosis	29
Typhoid fever	37
Whooping cough	22

MONTANA

Cerebrospinal meningitis	1
Chicken pox	16
Diphtheria	5
Measles	8
Poliomyelitis	3
Scarlet fever	46
Smallpox	5
Tuberculosis	22
Typhoid fever	7
Whooping cough	8

NEBRASKA	Cases
Chicken pox	2
Diphtheria	[illegible]
Scarlet fever	23
Smallpox	1
Trachoma	4
Typhoid fever	7
Whooping cough	11

NEW JERSEY

Chicken pox	61
Diphtheria	83
Influenza	2
Measles	38
Pneumonia	48
Poliomyelitis	1
Rabies	2
Scarlet fever	57
Typhoid fever	33
Whooping cough	113

NEW MEXICO

Cerebrospinal meningitis	1
Diphtheria	13
Malaria	1
Measles	1
Mumps	2
Pellagra	1
Pneumonia	2
Scarlet fever	13
Tuberculosis	33
Typhoid fever	25
Whooping cough	1

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	1
Chicken pox	108
Diphtheria	52
Dysentery	3
German measles	10
Influenza	1
Malaria	10
Measles	141
Mumps	46
Pneumonia	126
Poliomyelitis	32
Scarlet fever	82
Septic sore throat	4
Smallpox	1
Trachoma	1
Typhoid fever	39
Vincent's angina	14
Whooping cough	244

NORTH CAROLINA

Chicken pox	10
Diphtheria	209
German measles	6
Malaria	23
Measles	8
Poliomyelitis	6
Scarlet fever	162
Septic sore throat	2
Smallpox	27
Typhoid fever	63
Whooping cough	134

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Cerebrospinal meningitis—Delaware County	1
Diphtheria	34
Influenza	58
Malaria	177
Pellagra	9
Pneumonia	12
Poliomyelitis—Craig County	1
Scarlet fever	21
Typhoid fever	109

OREGON

	Cases
Cerebrospinal meningitis	1
Chicken pox	14
Diphtheria	11
Influenza	10
Lethargic encephalitis	1
Measles	6
Mumps	14
Pneumonia	[1]4
Poliomyelitis	3
Scarlet fever	45
Smallpox	17
Tuberculosis	[1]4
Typhoid fever	9
Whooping cough	5

PENNSYLVANIA

	Cases
Chicken pox	89
Diphtheria	136
German measles	4
Impetigo contagiosa	11
Malaria	3
Measles	162
Mumps	47
Ophthalmia neonatorum	5
Pneumonia	31
Poliomyelitis	
Bellefonte	1
Cambria	1
Philadelphia	1
Scabies	6
Scarlet fever	114
Tetanus—McDonald	1
Trachoma—Philadelphia	1
Tuberculosis	63
Typhoid fever	117
Whooping cough	201

SOUTH DAKOTA

	Cases
Chicken pox	2
Diphtheria	3
Measles	92
Pneumonia	3
Poliomyelitis	1
Scarlet fever	43
Tetanus	1
Tuberculosis	2
Typhoid fever	3
Whooping cough	20

TENNESSEE

	Cases
Cerebrospinal meningitis—Maury County	1
Chicken pox	3
Diphtheria	95
Influenza	15
Malaria	104
Measles	9
Mumps	1
Ophthalmia neonatorum	1
Pellagra	7
Pneumonia	15
Poliomyelitis—Dyer County	1
Scarlet fever	50
Smallpox	3
Tuberculosis	34
Typhoid fever	119
Whooping cough	91

TEXAS

	Cases
Chicken pox	2
Diphtheria	40
Dysentery	10
Influenza	17
Measles	2
Mumps	1
Pellagra	1
Pneumonia	5
Scarlet fever	19
Smallpox	5
Tetanus	1
Tuberculosis	1
Typhoid fever	56
Whooping cough	15

UTAH

	Cases
Chicken pox	16
Diphtheria	10
German measles	5
Influenza	1
Measles	26
Mumps	2
Pneumonia	3
Scarlet fever	5
Smallpox	2
Typhoid fever	3
Whooping cough	14

VERMONT

	Cases
Chicken pox	8
Diphtheria	1
Measles	53
Mumps	11
Poliomyelitis	1
Scarlet fever	2
Typhoid fever	2
Whooping cough	52

VIRGINIA

	Cases
Poliomyelitis—Shenandoah County	1

WASHINGTON

	Cases
Cerebrospinal meningitis	
Bellingham	1
Spokane	2
Chicken pox	37
Diphtheria	41
German measles	2
Measles	5

[1] Deaths.

WASHINGTON—continued	Cases
Mumps	14
Scarlet fever	47
Smallpox	17
Tuberculosis	60
Typhoid fever	6
Whooping cough	12
WEST VIRGINIA	
Chicken pox	9
Diphtheria	50
Influenza	21
Measles	19
Scarlet fever	48
Tuberculosis	11
Typhoid fever	67
Whooping cough	48
WISCONSIN	
Milwaukee:	
Chicken pox	6
Diphtheria	11
German measles	1
Influenza	1
Measles	2
Mumps	13
Pneumonia	9
Scarlet fever	20

WISCONSIN—continued	Cases
Milwaukee—Continued	
Tuberculosis	5
Typhoid fever	2
Whooping cough	37
Scattering:	
Cerebrospinal meningitis	2
Chicken pox	18
Diphtheria	19
Influenza	16
Measles	159
Mumps	6
Pneumonia	4
Scarlet fever	47
Smallpox	6
Tuberculosis	27
Typhoid fever	6
Whooping cough	95
WYOMING	
Chicken pox	3
Diphtheria	1
Measles	1
Mumps	1
Scarlet fever	15
Typhoid fever	2
Whooping cough	3

Reports for Week Ended October 2, 1926

ALABAMA	Cases
Chicken pox	1
Diphtheria	70
Influenza	10
Lethargic encephalitis	1
Malaria	126
Measles	7
Mumps	3
Ophthalmia neonatorum	1
Pellagra	6
Pneumonia	21
Scarlet fever	13
Smallpox	1
Tetanus	1
Tuberculosis	50
Typhoid fever	116
Whooping cough	33
DISTRICT OF COLUMBIA	
Diphtheria	16
Measles	1
Pneumonia	11
Poliomyelitis	1
Scarlet fever	12
Tuberculosis	21
Typhoid fever	7
Whooping cough	27

NORTH DAKOTA	Cases
Chicken pox	2
Diphtheria	1
Measles	20
Mumps	31
Paratyphoid fever	1
Pneumonia	1
Scarlet fever	37
Tuberculosis	4
Typhoid fever	6
Whooping cough	16
SOUTH CAROLINA	
Chicken pox	1
Dengue	2
Diphtheria	88
Hookworm disease	41
Influenza	197
Malaria	580
Measles	5
Paratyphoid fever	4
Pellagra	59
Poliomyelitis	4
Scarlet fever	12
Smallpox	1
Tuberculosis	40
Typhoid fever	107
Whooping cough	36

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
August, 1926										
Delaware		5					5	9	0	5
September, 1926										
Arizona	0	6			14		1	13	0	10
Connecticut	0	42	3	4	26		11	89	0	34
District of Columbia	0	48	1		3	3	1	25	0	24

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended September 25, 1926, 38 States reported 1,277 cases of diphtheria. For the week ended September 26, 1925, the same States reported 1,272 cases of this disease. Ninety-six cities, situated in all parts of the country and having an aggregate population of more than 29,600,000, reported 615 cases of diphtheria for the week ended September 25, 1926. Last year for the corresponding week they reported 541 cases. The estimated expectancy for these cities was 786 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-seven States reported 793 cases of measles for the week ended September 25, 1926, and 330 cases of this disease for the week ended September 26, 1925. Ninety-six cities reported 211 cases of measles for the week this year, and 193 cases last year.

Poliomyelitis.—The health officers of 38 States reported 117 cases of poliomyelitis for the week ended September 25, 1926 The same States reported 284 cases for the week ended September 26, 1925.

Scarlet fever—Scarlet fever was reported for the week as follows: Thirty-eight States—this year, 1,235 cases; last year, 1,018 cases; 96 cities—this year, 452 cases; last year, 327 cases; estimated expectancy, 404 cases.

Smallpox.—For the week ended September 25, 1926, 38 States reported 123 cases of smallpox. Last year for the corresponding week they reported 102 cases. Ninety-six cities reported smallpox for the week as follows: 1926, 17 cases; 1925, 31 cases; estimated expectancy, 22 cases. No deaths from smallpox were reported by these cities for the week this year

Typhoid fever.—One thousand two hundred and thirty-eight cases of typhoid fever were reported for the week ended September 25, 1926, by 38 States. For the corresponding week of 1925, the same States reported 1,222 cases of this disease. Ninety-six cities re-

ported 249 cases of typhoid fever for the week this year and 248 cases for the corresponding week last year. The estimated expectancy for these cities was 221 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 9[illegible] cities, with a population of more than 28,900,000 as follows: 1926, 39[illegible] deaths, 1925, 295 deaths.

City reports for week ended September 25, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	1	1	0	0	0	0	0	0
New Hampshire									
Concord	22,546	0	0	0	0	0	0	0	0
Manchester	83,097		3	0	0	0	0		0
Vermont									
Barre	10,008	0	0	0	0	0	0	0	0
Burlington	24,089	0	0	0	0	0	0	0	5
Massachusetts									
Boston	779,620	10	34	13	9	1	7	5	19
Fall River	128,993	0	3	2	0	0	1	1	1
Springfield	142,065	3	2	0	1	1	0	0	0
Worcester	190,757	0	5	9	0	0	2	0	2
Rhode Island									
Pawtucket	69,760	0	1	1	0	0	0	0	0
Providence	267,918	0	4	3	1	0	3	0	0
Connecticut									
Bridgeport	(1)	0	6	2	0	0	2	0	0
Hartford	160,197	0	5	0	0	0	0	0	8
New Haven	178,927	1	3	1	0	0	1	0	2
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	0	16	3		0	1	1	7
New York	5,873,356	14	112	88	8	3	3	14	85
Rochester	316,786	0	6	0		2	2	0	4
Syracuse	182,003	3	6	0		0	2	3	2
New Jersey									
Camden	128,642	1	3	5	0	0	0	0	2
Newark	452,513	2	11	7	2	0	0	2	4
Trenton	132,020	0	4	2	0	0	0	0	2
Pennsylvania									
Philadelphia	1,979,364	10	54	24		2	5	3	21
Pittsburgh	631,563	11	19	10		0	5	0	12
Reading	112,707	2	3	1		0	0	0	2
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	0	12	3	0	0	2	2	3
Cleveland	936,485	8	32	24	0	3	2	0	6
Columbus	279,836	2	5	2	0	0	1	0	1
Toledo	287,380	1	11	4	0	0	1	0	2

[1] No estimate made

City reports for week ended September 25, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Indiana									
Fort Wayne	97,846	0	3	1	0	0	0	0	0
Indianapolis	358,819	0	9	9	0	0	0	0	7
South Bend	80,091	0	1	3	0	0	2	0	0
Terre Haute	71,071	0	1	0	0	0	1	0	1
Illinois:									
Chicago	2,995,239	22	86	50	1	1	14	9	28
Peoria	81,564	0	1	0	0	0	2	4	1
Springfield	63,923	1	2	1	1	0	4	0	1
Michigan									
Detroit	1,245,824	5	39	78	1	1	2	0	11
Flint	130,316	0	8	3	0	0	1	0	1
Grand Rapids	153,698	0	3	1	0	0	0	0	0
Wisconsin									
Kenosha	50,891	1	1	0	0	0	2	0	0
Madison	46,385	------	1	------	------	------	------	------	------
Milwaukee	509,192	3	15	8	0	0	3	4	7
Racine	67,707	0	1	1	0	0	1	2	0
Superior	39,671	0	1	4	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	110,502	0	2	3	0	0	3	0	1
Minneapolis	425,435	6	24	16	0	0	0	2	6
St. Paul	246,001	2	17	10	0	1	1	2	11
Iowa:									
Davenport	52,469	0	1	0	0	------	3	0	------
Des Moines	141,441	0	6	0	0	------	0	0	------
Sioux City	76,411	0	2	1	0	------	0	0	------
Waterloo	36,771	0	1	1	0	------	0	0	------
Missouri:									
Kansas City	367,481	0	7	0	3	3	2	0	2
St. Joseph	78,342	0	2	1	0	0	0	1	0
St. Louis	821,543	1	27	25	0	0	4	5	------
North Dakota									
Fargo	26,403	1	0	0	0	0	0	3	0
Grand Forks	14,811	0	0	0	0	------	0	0	------
South Dakota									
Aberdeen	15,036	0	0	0	0	------	1	2	------
Nebraska									
Lincoln	60,941	1	1	2	0	0	0	1	1
Omaha	211,768	0	14	2	0	0	0	0	4
Kansas									
Topeka	55,411	0	1	2	0	0	0	0	0
Wichita	88,367	0	2	2	0	0	4	1	2
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	1	0	0	0	0	0	1
Maryland:									
Baltimore	796,296	1	17	14	2	1	0	1	10
Cumberland	33,741	0	0	0	0	0	0	0	0
Frederick	12,035	0	0	0	0	0	0	0	0
District of Columbia:									
Washington	497,906	1	7	8	0	0	2	0	9
Virginia:									
Lynchburg	30,395	0	1	4	0	0	0	0	0
Norfolk	(1)	0	2	3	0	0	0	0	3
Richmond	186,403	0	16	13	0	1	0	0	2
Roanoke	58,208	0	5	4	0	0	0	0	1
West Virginia:									
Charleston	49,019	0	2	0	0	1	0	0	0
Huntington	63,485	0	2	0	0	0	0	0	0
Wheeling	56,208	1	2	1	0	0	1	0	0
North Carolina:									
Raleigh	30,371	0	3	7	0	0	0	0	1
Wilmington	37,061	0	1	0	0	2	0	0	1
Winston-Salem	69,031	2	3	2	0	0	0	0	0

1 No estimate made.

City reports for week ended September 25, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—con.									
South Carolina									
Charleston	73,125	0	0	0	13		0	0	2
Columbia	41,225	0	1	2	0		0	0	0
Greenville	27,311	0	1	1	0	0	0	0	1
Georgia									
Atlanta	(1)	0	6	8	5	0	1	2	8
Brunswick	16,809	0	1	0	0	0	0	0	0
Savannah	93,134	0	2	0	6	0	0	0	1
Florida									
Miami	69,754	0	----	12	0	0	0	0	2
St. Petersburg	26,847	----	0	----	----	0	----	----	0
Tampa	94,743	1	1	1	0	0	2	0	2
EAST SOUTH CENTRAL									
Kentucky:									
Covington	58,309	----	2	----	----	----	----	----	----
Louisville	305,935	0	8	6	0	0	0	1	7
Tennessee									
Memphis	174,533	0	7	0	0	1	2	1	1
Nashville	136,220	0	3	9	0	0	0	0	3
Alabama									
Birmingham	205,670	2	6	6	1	0	0	2	1
Mobile	65,955	0	2	0	0	1	0	0	4
Montgomery	46,481	0	2	5	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	31,643	0	1	0	0	----	0	0	----
Little Rock	74,216	0	1	0	0	0	0	0	0
Louisiana									
New Orleans	414,493	0	8	5	0	0	0	0	7
Shreveport	57,857	0	0	0	0	0	0	1	1
Oklahoma:									
Oklahoma City	(1)	1	2	2	6	0	0	0	0
Texas									
Dallas	194,450	0	5	4	5	4	0	0	9
Galveston	48,375	0	0	0	0	0	0	0	0
Houston	164,954	0	2	4	0	0	0	0	3
San Antonio	198,069	0	0	3	0	1	0	0	1
MOUNTAIN									
Montana									
Billings	17,971	0	0	0	0	0	0	0	1
Great Falls	29,883	2	1	0	0	1	0	0	0
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	0	0	0	0	0	0	0	0
Idaho									
Boise	23,042	0	0	2	0	0	0	0	0
Colorado									
Denver	280,911	0	12	8	0	----	5	0	2
Pueblo	43,787	0	4	0	0	0	1	0	0
New Mexico									
Albuquerque	21,000	1	0	1	0	0	0	1	0
Arizona:									
Phoenix	38,669	0	1	0	0	0	0	0	0
Utah									
Salt Lake City	130,948	4	3	5	0	0	7	1	3
Nevada:									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	5	5	7	0	----	2	8	----
Spokane	108,897	0	3	1	0	----	2	0	----
Tacoma	104,455	0	3	9	0	0	0	1	1
Oregon:									
Portland	282,383	1	5	4	0	0	5	1	4
California									
Los Angeles	(1)	5	27	39	9	0	2	6	13
Sacramento	72,260	0	2	6	0	0	13	9	2
San Francisco	557,530	16	14	17	2	2	96	7	6

[1] No estimate made

City reports for week ended September 25, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	1	0	0	0	0	0	1	1	0	6	15
New Hampshire											
Concord	1	0	0	0	0	0	0	0	0	0	5
Manchester	1	2	0	0	0	0	0	0	0	0	10
Vermont											
Barre	1	0	0	0	0	1	0	0	0	2	1
Burlington	1	0	0	0	0	0	0	0	0	0	7
Massachusetts											
Boston	16	14	0	0	0	21	5	3	1	36	238
Fall River	1	1	0	0	0	3	3	0	0	2	27
Springfield	3	1	0	0	0	0	0	0	0	1	28
Worcester	3	5	0	0	0	1	1	0	1	3	47
Rhode Island											
Pawtucket	1	2	0	0	0	0	0	0	0	0	14
Providence	3	2	0	0	0	2	1	0	0	5	48
Connecticut											
Bridgeport	2	4	0	0	0	2	0	0	0	2	20
Hartford	2	0	0	0	0	5	2	0	0	1	--------
New Haven	2	1	0	0	0	1	3	0	0	0	56
MIDDLE ATLANTIC											
New York											
Buffalo	8	2	0	1	0	14	3	1	0	8	116
New York	40	51	0	0	0	[1] 84	41	50	4	38	1,201
Rochester	4	2	0	0	0	0	1	4	0	5	51
Syracuse	5	0	0	0	0	4	2	3	0	16	34
New Jersey											
Camden	2	3	0	0	0	1	2	1	0	6	31
Newark	6	4	0	0	0	4	2	4	0	37	79
Trenton	0	2	0	0	0	3	1	0	0	7	30
Pennsylvania											
Philadelphia	23	38	0	0	0	28	14	21	0	42	424
Pittsburgh	17	10	0	0	0	7	4	7	0	27	161
Reading	0	0	0	0	0	0	3	0	0	9	33
EAST NORTH CENTRAL											
Ohio											
Cincinnati	6	1	0	0	0	7	2	2	0	6	120
Cleveland	13	8	1	0	0	17	4	12	0	54	187
Columbus	4	7	0	0	0	5	1	1	0	5	78
Toledo	5	6	1	0	0	4	3	2	1	11	76
Indiana											
Fort Wayne	1	1	1	0	0	1	1	1	1	0	17
Indianapolis	5	1	1	1	0	8	3	4	0	6	105
South Bend	2	2	0	0	0	0	0	0	0	2	15
Terre Haute	0	2	0	0	0	1	1	0	0	2	20
Illinois											
Chicago	45	46	1	0	0	39	7	10	0	55	619
Peoria	4	1	0	0	0	0	0	1	0	3	23
Springfield	1	2	0	0	0	1	1	0	0	7	17
Michigan											
Detroit	31	29	2	0	0	24	6	4	0	78	278
Flint	4	3	0	1	0	1	1	1	0	1	20
Grand Rapids	4	2	0	0	0	2	1	1	0	3	27
Wisconsin											
Kenosha	1	1	0	0	0	0	0	0	0	19	7
Madison	1	--------	0	--------	--------	--------	0	--------	--------	--------	--------
Milwaukee	15	11	1	0	0	3	0	1	0	60	89
Racine	2	0	0	0	0	0	0	1	0	4	7
Superior	1	2	0	0	0	1	0	0	0	0	9
WEST NORTH CENTRAL											
Minnesota:											
Duluth	4	8	0	0	0	1	1	0	0	0	26
Minneapolis	17	27	0	0	0	4	2	1	0	0	88
St. Paul	8	18	2	0	0	3	2	3	0	14	69

[1] Pulmonary tuberculosis only

City reports for week ended September 25, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL—con											
Iowa											
Davenport	0	1	0	0			0	0		0	
Des Moines	5	0	0	0			0	0		0	
Sioux City	1	0	0	0			0	0		1	
Waterloo	1	0	0	0			0			0	
Missouri											
Kansas City	4	0	0	0	0	3		[illegible]	2	[illegible]	[illegible]
St Joseph	2	1	0	0	0	0	0	1	0	0	[illegible]
St Louis	15	16	0	1	0	4	[illegible]	4	2	16	[illegible]
North Dakota											
Fargo	0	0	0	0	0	0	0	1	0	2	
Grand Forks	0	4	0	0			0	0	0	0	
South Dakota											
Aberdeen	1	0	1	0			0	[illegible]		0	
Nebraska											
Lincoln	1	1	0	0	0	0	0	[illegible]	0	4	[illegible]
Omaha	2	3	1	0	0	2	1	[illegible]	0	2	[illegible]
Kansas											
Topeka	2	0	0	0	0	1	1	[illegible]	0	7	[illegible]
Wichita	2	3	1	0	0	1	2	[illegible]	0	5	[illegible]
SOUTH ATLANTIC											
Delaware											
Wilmington	1	2	0	0	0	0	1	1	0	0	[illegible]
Maryland											
Baltimore	7	7	0	0	0	21	11	[illegible]	1	61	[illegible]
Cumberland	0	0	0	0	0	1	1	0	0	0	15
Frederick	0	0	0	0	0	0	0	0	0	2	
District of Columbia											
Washington	6	7	0	0	0	10	5	6	1	8	[illegible]
Virginia											
Lynchburg	1	2	0	0	0	0	1	3	0	0	11
Norfolk	1	1	0	0	0	3	1	2	0	4	
Richmond	5	3	0	0	0	3	2	1	0	0	[illegible]
Roanoke	2	1	0	1	0	0	2	0	1	0	26
West Virginia											
Charleston	1	3	0	0	0	0	2	[illegible]	1	3	18
Huntington	0	3	0	0	0	2	0	3	0	0	15
Wheeling	2	2	0	0	0	1	2	2	0	0	[illegible]
North Carolina											
Raleigh	1	0	0	0	0	1	0	1	0	9	10
Wilmington	1	2	0	0	0	1	0	0	0	5	8
Winston-Salem	1	9	1	0	0	1	2	1	0	6	13
South Carolina											
Charleston	0	0	0	1	0	1	3	4	0	0	[illegible]
Columbia	0	0	0	0	0	0	1	0	0	0	
Greenville	0	2	0	0	0	0	0	1	0	2	12
Georgia											
Atlanta	4	1	0	0	0	0	4	[illegible]	2	1	[illegible]
Brunswick	0	0	0	0	0	0	0	0	0	0	[illegible]
Savannah	1	0	0	1	0	5	1	0	0	0	[illegible]
Florida											
Miami		0		0	0	0		1	0	2	[illegible]
St Petersburg	0		0		0	0	0		0		4
Tampa	0	0	0	0	0	3	0	0	0	1	45
EAST SOUTH CENTRAL											
Kentucky											
Covington	1		0				0				
Louisville	2	7	0	0	0	8	5	6	1	3	73
Tennessee											
Memphis	2	2	1	0	0	8	5	0	1	17	58
Nashville	3	3	0	0	0	4	5	16	4	10	39
Alabama											
Birmingham	5	4	1	0	0	4	6	2	0	2	49
Mobile	0	0	0	0	0	1	1	0	0	0	18
Montgomery	1	0	0	0	0	0	0	8	0	0	5

City reports for week ended September 25, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	0	1	0	0	--------	-------	0	0	------	3	--------
Little Rock	1	0	0	0	0	0	2	2	0	0	--------
Louisiana											
New Orleans	2	0	0	0	0	12	4	8	1	1	105
Shreveport	0	3	0	0	0	1	2	0	0	0	22
Oklahoma											
Oklahoma City	1	2	0	0	0	1	2	5	1	0	24
Texas											
Dallas	2	4	0	1	0	2	2	3	0	1	67
Galveston	1	0	0	0	0	1	0	0	0	0	17
Houston	0	1	0	0	0	5	1	0	0	0	53
San Antonio	0	3	0	2	0	6	0	5	1	0	41
MOUNTAIN											
Montana											
Billings	0	1	0	0	0	0	0	0	0	0	9
Great Falls	0	1	0	0	0	0	0	1	0	1	10
Helena	0	0	0	0	0	0	0	0	0	0	5
Missoula	1	2	1	0	0	0	0	0	0	0	2
Idaho											
Boise	1	0	1	0	0	0	0	0	0	0	7
Colorado											
Denver	4	5	2	0	0	10	4	1	0	5	62
Pueblo	1	0	0	0	0	0	1	0	0	1	8
New Mexico											
Albuquerque	1	0	0	0	0	6	2	1	0	1	14
Arizona											
Phoenix	0	1	0	0	0	5	1	0	0	0	17
Utah:											
Salt Lake City	2	4	0	0	0	0	3	2	0	3	33
Nevada											
Reno	0	0	1	0	0	0	0	0	0	0	2
PACIFIC											
Washington:											
Seattle	6	8	0	1	--------	-------	1	4	--------	4	--------
Spokane	5	2	1	0	--------	-------	1	0	--------	0	--------
Tacoma	2	1	0	3	0	0	1	0	0	2	20
Oregon											
Portland	4	18	2	0	0	3	2	1	0	1	57
California											
Los Angeles	8	17	1	2	0	22	5	2	0	10	217
Sacramento	1	1	0	1	0	1	1	0	0	1	26
San Francisco	6	15	1	0	0	6	1	2	0	6	135

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts									
Boston	2	0	1	0	0	0	2	4	1
Springfield	0	0	0	0	0	0	0	1	0
Connecticut:									
Hartford	0	0	0	0	0	0	0	0	1
New Haven	0	0	0	0	0	0	0	1	1

City reports for week ended September 25, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
MIDDLE ATLANTIC									
New York									
Buffalo	1	0	0	0	0	0	0	13	0
New York	8	4	3	1	0	0	13	9	3
Rochester	0	0	0	0	0	0	1	1	0
Syracuse	0	0	0	0	0	0	1	2	0
New Jersey									
Newark	0	0	2	0	0	0	0	0	0
Pennsylvania									
Philadelphia	0	0	0	0	0	0	1	1	0
EAST NORTH CENTRAL									
Ohio									
Cincinnati	1	0	0	0	0	0	0	0	0
Cleveland	0	0	0	0	0	0	1	3	0
Columbus	1	1	0	0	0	0	0	0	0
Illinois									
Chicago	0	0	1	1	0	1	5	2	1
Michigan									
Detroit	0	0	2	0	0	1	1	3	0
Flint	0	0	0	0	0	0	0	1	1
WEST NORTH CENTRAL									
Iowa									
Waterloo	0	0	1	0	0	0	0	0	0
Missouri									
Kansas City	2	0	0	0	0	0	1	0	0
St Louis	0	0	0	0	0	0	1	1	0
SOUTH ATLANTIC									
Maryland									
Baltimore	0	1	0	0	0	0	1	2	0
Virginia									
Lynchburg	0	0	0	0	0	1	0	0	0
Norfolk	0	0	0	0	0	0	0	2	2
Roanoke	0	0	0	0	0	2	0	0	0
North Carolina									
Wilmington	1	0	0	0	0	0	0	0	0
Winston-Salem	0	0	0	0	1	2	0	0	0
Georgia									
Savannah	1	1	0	0	0	0	0	2	0
Florida									
Miami	0	0	0	0	1	0	-------	0	0
Tampa	0	2	0	0	0	0	0	0	0
EAST SOUTH CENTRAL									
Tennessee									
Memphis	0	0	0	0	0	1	0	0	0
Alabama									
Birmingham	0	0	0	0	2	0	0	0	0
Mobile	0	0	1	0	0	1	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	3	0	0	0
Louisiana									
New Orleans	2	0	0	0	0	0	0	1	0
Shreveport	0	0	0	0	0	1	0	0	0
Texas									
Dallas	0	0	0	0	0	1	0	1	0
Houston	0	2	0	0	0	0	0	0	0
MOUNTAIN									
Arizona									
Phoenix	0	0	0	0	0	1	0	0	0
PACIFIC									
Washington									
Seattle	0	0	0	0	0	0	1	1	0
Oregon									
Portland	0	0	0	0	0	0	0	2	0
California									
Los Angeles	1	1	0	0	0	0	1	2	0
San Francisco	1	0	2	0	0	0	0	0	0

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended September 25, 1926, compared with those for a like period ended September 26, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926 The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below

Summary of weekly reports from cities, August 22 to September 25, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Aug 29, 1925	Aug. 28, 1926	Sept. 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926
101 cities	[2] 72	[3] 65	[4] 70	74	92	76	[5] 95	[6] 84	[5] 97	[7] 108
New England	41	50	43	26	74	38	139	35	81	73
Middle Atlantic	63	56	61	59	89	53	83	63	81	[8] 69
East North Central	68	[3] 75	57	101	70	80	76	[9] 95	101	[10] 129
West North Central	117	81	100	66	143	75	145	95	153	127
South Atlantic	[2] 68	62	106	69	119	137	88	111	109	128
East South Central	37	57	32	42	74	104	74	[11] 116	58	[11] 143
West South Central	92	34	31	60	119	86	57	77	75	69
Mountain	166	73	305	91	194	173	[5] 217	237	[5] 189	137
Pacific	105	92	[4] 76	135	75	92	130	[12] 97	102	213

MEASLES CASE RATES

	Aug 29, 1925	Aug. 28, 1926	Sept. 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926
101 cities	[2] 27	[3] 27	[4] 22	25	22	26	[5] 29	[6] 28	[5] 35	[7] 37
New England	86	38	50	33	91	35	108	19	177	38
Middle Atlantic	34	15	25	17	25	11	34	10	33	[8] 7
East North Central	20	[3] 32	20	30	16	18	22	[9] 21	22	[10] 22
West North Central	4	20	6	10	4	10	8	12	6	28
South Atlantic	[2] 23	15	23	9	21	19	15	9	29	11
East South Central	11	36	0	31	0	16	5	[11] 17	11	[11] 11
West South Central	0	4	0	0	4	4	4	4	0	0
Mountain	28	27	0	36	9	100	[5] 9	73	[5] 28	118
Pacific	6	94	[4] 26	92	8	159	11	[12] 225	19	310

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported Populations used are estimated as of July 1, 1925, and 1926, respectively.
[2] Greenville, S C, not included.
[3] Madison, Wis, not included
[4] Spokane, Wash, not included.
[5] Helena, Mont., not included
[6] Racine, Wis, Covington, Ky, and Tacoma, Wash., not included
[7] Pittsburgh, Pa., Madison, Wis, Racine, Wis, and Covington, Ky, not included.
[8] Pittsburgh, Pa, not included.
[9] Racine, Wis, not included.
[10] Madison, Wis., and Racine, Wis, not included
[11] Covington, Ky., not included
[12] Tacoma, Wash, not included.

Summary of weekly reports from cities, August 22 to September 25, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

SCARLET FEVER CASE RATES

	Week ended—									
	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926
101 cities	[2] 45	[3] 55	[4] 54	51	51	58	[5] 60	[6] 67	[5] 63	[7] 80
New England	67	54	46	59	62	80	60	76	46	71
Middle Atlantic	27	32	30	25	31	32	46	44	48	[8] 54
East North Central	45	[3] 55	58	59	57	62	58	[9] 64	65	[10] 81
West North Central	110	133	123	131	102	93	133	129	135	153
South Atlantic	[2] 39	58	56	38	54	56	36	49	61	79
East South Central	26	62	131	57	110	109	53	[11] 127	74	[11] 88
West South Central	18	26	35	26	31	47	40	30	13	5[illegible]
Mountain	28	64	74	82	37	73	[5] 161	82	[5] 85	118
Pacific	66	75	[4] 50	70	36	89	64	[12] 123	77	119

SMALLPOX CASE RATES

	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926
101 cities	[2] 8	[3] 4	[4] 5	2	5	2	[5] 6	[6] 1	[5] 5	[7] 3
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	1	0	0	1	0	0	0	0	0	[8] 1
East North Central	8	[3] 7	5	0	2	2	2	[9] 0	2	[10] 1
West North Central	4	0	4	0	0	2	2	0	2	2
South Atlantic	[2] 12	9	2	9	12	2	12	9	6	6
East South Central	53	0	11	10	21	0	37	[11] 0	32	[11] 0
West South Central	13	9	4	4	4	0	4	4	0	13
Mountain	9	0	9	0	18	0	[5] 0	0	[5] 38	0
Pacific	28	13	[4] 38	13	41	16	47	[12] 0	39	19

TYPHOID FEVER CASE RATES

	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926
101 cities	[2] 45	[3] 40	[4] 38	40	41	45	[5] 49	[6] 53	[5] 44	[7] 44
New England	26	19	29	12	34	17	29	33	22	9
Middle Atlantic	30	39	29	34	27	34	35	55	34	[8] 45
East North Central	26	[3] 18	17	20	20	20	18	[9] 28	29	[10] 26
West North Central	35	42	22	42	57	50	57	26	16	26
South Atlantic	[2] 89	56	58	92	48	105	104	81	88	92
East South Central	163	233	168	176	226	285	194	[11] 264	200	[11] 176
West South Central	106	39	167	43	70	39	159	69	97	77
Mountain	111	18	28	9	129	18	[5] 85	82	[5] 94	36
Pacific	52	38	[4] 29	46	28	27	28	[12] 37	22	22

INFLUENZA DEATH RATES

	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926
95 cities	[2] 3	[3] 3	2	3	4	4	[5] 5	[6] 4	[5] 3	[7] 6
New England	0	0	0	0	2	0	0	0	0	5
Middle Atlantic	3	3	3	2	3	4	6	3	3	[8] 4
East North Central	4	[3] 3	3	4	7	4	4	[9] 3	4	[10] 3
West North Central	2	8	2	4	0	0	6	4	4	8
South Atlantic	[2] 2	2	2	0	0	0	2	6	2	9
East South Central	5	0	0	16	5	0	5	[11] 6	0	[11] 11
West South Central	15	5	5	9	5	19	10	24	0	24
Mountain	9	18	18	9	28	36	[5] 19	0	[5] 9	9
Pacific	0	0	0	0	4	0	0	[12] 8	4	7

[2] Greenville, S C, not included.
[3] Madison, Wis, not included
[4] Spokane, Wash, not included
[5] Helena, Mont, not included
[6] Racine, Wis, Covington, Ky, and Tacoma, Wash, not included
[7] Pittsburgh, Pa, Madison, Wis, Racine, Wis, and Covington, Ky., not included.
[8] Pittsburgh, Pa, not included
[9] Racine, Wis, not included
[10] Madison, Wis, and Racine, Wis., not included.
[11] Covington, Ky, not included
[12] Tacoma, Wash, not included

Summary of weekly reports from cities, August 22 to September 25, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

PNEUMONIA DEATH RATES

	Week ended—									
	Aug 29, 1925	Aug 28, 1926	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926
95 cities	[2] 61	[3] 48	70	51	61	51	[5] 60	[6] 53	[5] 54	[7] 65
New England	41	33	53	50	50	40	67	54	53	• 76
Middle Atlantic	65	56	84	59	68	65	61	51	66	[8] 68
East North Central	50	[3] 38	59	34	46	37	44	[9] 41	39	[10] 46
West North Central	54	42	32	36	36	30	45	51	26	55
South Atlantic	[2] 80	58	54	64	60	41	81	54	86	79
East South Central	63	47	131	52	142	42	79	[11] 50	42	[11] 88
West South Central	106	76	73	52	82	104	77	123	48	99
Mountain	74	73	83	64	37	64	[5] 113	118	[5] 76	55
Pacific	62	21	95	78	91	57	62	[12] 57	51	78

[2] Greenville, S C , not included
[3] Madison, Wis , not included
[5] Helena, Mont , not included
[6] Racine, Wis , Covington, Ky , and Tacoma, Wash., not included.
[7] Pittsburgh, Pa., Madison, Wis , Racine, Wis , and Covington, Ky., not included.
[8] Pittsburgh, Pa , not included.
[9] Racine, Wis , not included.
[10] Madison, Wis , and Racine, Wis , not included.
[11] Covington, Ky , not included
[12] Tacoma, Wash , not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427 598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7 655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,131,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Reports for two weeks ended September 18, 1926.—The following reports for the weeks ended September 11 and September 18, 1926, were transmitted by the Far Eastern Bureau of the Secretariat of the League of Nations, located at Singapore, to the headquarters at Geneva:

Week Ended September 11, 1926

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt Alexandria	0	0	0	0	1	0
British India						
Bombay	------	0	------	0	5	3
Madras	------	0	------	0	3	0
Rangoon	------	11	------	0	1	0
Tuticorin	------	0	------	0	3	0
Negapatam	0	0	0	1	0	0
Siam Bangkok	0	0	7	4	4	3
Dutch East Indies Cheribon	0	0	0	0	2	0
China						
Amoy	0	0	53	--------	0	0
Shanghai	0	0	57	21	0	0
Manchuria Harbin	0	0	27	7	0	0
Kwantung Dairen	0	0	3	1	0	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia —Aden.

Iraq.—Basra

British India.—Karachi, Chittagong, Cochin, Vizagapatam.

Ceylon —Colombo.

Federated Malay States —Port Swettenham

Straits Settlements Penang, Singapore

Dutch East Indies —Batavia, Surabaya, Samarang, Belawan Deli, Palembang, Sabang, Makassar, Banjermasin, Tarakan, Padang Samarinda, Pontianak, Menado, Balik-Papan.

Sarawak —Kuching.

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.

Portuguese Timor —Dilly.

Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.

French Indo-China —Saigon and Cholon, Turane.

China.—Hongkong.

Formosa —Keelung

Japan —Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki.

Korea.—Chemulpo, Fusan.
Manchuria.—Antung, Mukden, Changchun.
Kwantung.—Port Arthur.
U. S. S. R.—Vladivostok.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Garnarvon, Thursday Island.
New Guinea.—Port Moresby.
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia.—Noumea.
Fiji.—Suva.
Hawaii.—Honolulu.
Society Islands.—Papeete.

AFRICA

Egypt.—Port Said, Suez.
Anglo-Egyptian Sudan.—Port Sudan, Suakin.
Eritrea.—Massaua.
French Somaliland.—Jibuti.
British Somaliland.—Berbera.
Italian Somaliland.—Mogadiscio.
Kenya.—Mombasa.
Zanzibar.—Zanzibar.
Tanganyiki.—Dar-es-Salaam.
Seychelles.—Victoria.
Mauritius.—Port Louis.
Portuguese East Africa.—Mozambique, Beira, Lourenço-Marques.
Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from:

British India.—Calcutta.
French Indo-China.—Haiphong.
Madagascar.—Tamatave, Majunga.

Week Ended September 18, 1926

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt. Alexandria	0	0	0	0	4	0
British India:						
Bombay	------	3	------	0	3	1
Madras	------	0	------	1	5	1
Rangoon	------	8	------	0	0	0
Tuticorin	------	0	------	0	1	0
Negapatam	------	0	------	3	4	1
Ceylon. Colombo	0	0	0	0	2	0
Straits Settlements. Penang	0	0	0	0	1	0
Siam. Bangkok	0	0	2	1	8	4
Dutch East Indies. Cheribon [1]	1	0	0	0	0	0
China:						
Amoy	0	0	50	------	0	0
Shanghai	0	0	66	20	0	0
Kwantung: Dairen	0	0	1	0	0	0

[1] One infected rat was found in the port during the week.

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia.—Aden
Iraq.—Basra
British India.—Karachi, Chittagong, Cochin, Vizagapatam.
Federated Malay States.—Port Swettenham
Straits Settlements.—Singapore
Dutch East Indies.—Batavia, Surabaya, Samarang, Belawan Deli, Palembang, Sabang, Makassar, Banjermasin, Tarakan, Padang, Samarainda, Pontianak, Menado, Balik-Papan.
Sarawak.—Kuching
British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.
Portuguese Timor.—Dilly
Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.
French Indo-China.—Saigon and Cholon, Turane, Haïphong
China.—Hongkong.
Formosa.—Keelung
Japan.—Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki.
Korea.—Chemulpo, Fusan
Manchuria.—Antung, Mukden, Changchun.
Kwantung.—Port Arthur.
U. S. S. R.—Vladivostok.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island
New Guinea.—Port Moresby.
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia.—Noumea.
Fiji.—Suva.
Hawaii.—Honolulu.
Society Islands.—Papeete.

AFRICA

Egypt.—Port Said, Suez.
Anglo-Egyptian Sudan.—Port Sudan, Suakin.
Eritrea.—Massaua.
French Somaliland.—Jibuti.
British Somaliland.—Berbera.
Italian Somaliland.—Mogadiscio.
Kenya.—Mombasa
Zanzibar.—Zanzibar.
Tanganyika.—Dar-es-Salaam.
Seychelles.—Victoria.
Mauritius.—Port Louis.
Portuguese East Africa.—Mozambique, Beira, Laurenço-Marques.
Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from:

British India.—Calcutta.
Manchuria.—Harbin
Madagascar.—Tamatave, Majunga.

CANADA

Communicable diseases—Week ended September 25, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the week ended September 25, 1926 as follows:

Diseases	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Influenza	8							8
Lethargic encephalitis						2		2
Poliomyelitis				12				12
Smallpox				3	1		4	8
Typhoid fever	1	12	4	25	7	4	1	54

Communicable diseases—Ontario—September, 1926 (comparative) —During the month of September, 1926, communicable diseases were reported in the Province of Ontario, Canada, as follows:

Disease	September, 1926		September, 1925	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis	4		4	1
Chancroid	3			
Chicken pox	123		88	
Diphtheria	239	18	271	16
German measles	7		1	
Gonorrhea	133		134	
Influenza	6			10
Lethargic encephalitis			9	
Measles	149		59	
Mumps	15		29	
Pneumonia		88		85
Poliomyelitis	22		37	
Scarlet fever	141		162	5
Septic sore throat			4	
Smallpox	23		25	
Syphilis	89		70	
Tuberculosis	117	43	148	62
Typhoid fever	94	3	130	8
Whooping cough	232	10	295	7

Smallpox.—Smallpox was reported present in the Province of Ontario during the month of September, 1926, in 10 localities. The largest number of cases was reported at Peterboro, viz, 10.

Vital statistics—Quebec—July, 1926—Births and deaths in the Province of Quebec for the month of July have been reported as follows:

Estimated population	2,570,000
Births	6,702
Birth rate per 1,000 population	31.29
Deaths (all causes)	2,668
Death rate per 1,000 population	12.45
Deaths under 1 year	763
Infant mortality rate	113.84
Deaths from—	
Cancer	128
Cerebrospinal meningitis	13
Diabetes	26
Deaths from—Continued.	
Diphtheria	19
Heart diseases	326
Influenza	36
Measles	25
Scarlet fever	4
Syphilis	7
Tuberculosis (pulmonary)	216
Tuberculosis (other forms)	75
Typhoid fever	16
Whooping cough	30

CHINA

Cholera—Tsingtao—August 30, 1926.—On August 30, 1926, cholera was reported present at Tsingtao, China. The first case was reported in the person of an American, who died of the disease the day after his arrival in the city and is believed to have become infected en route to Tsingtao. The next occurrence was in the Japanese community, with about 10 fatalities. Among the Chinese population from 30 to 40 deaths from cholera were reported daily, the greater number occurring in villages in the immediate vicinity of the city. A second case in a foreigner occurred in a British subject.

Precautions against spread.—Cholera inoculation was administered to the police, military, and civil employees, but was not compulsory; orders were published forbidding use of uncooked food and fruits; quarantine supervision was exercised over arrivals from Amoy, Shanghai, and other ports in south China.

CHOSEN

Cholera—North Heian Province—September 9–16, 1926.—During the period September 9 to 16, 1926, 70 cases of cholera with 30 deaths, estimated, were reported in the North Heian Province, Chosen.

ESTHONIA

Communicable diseases—July, 1926.—During the month of July, 1926, communicable diseases were reported in the Republic of Esthonia as follows: Cases—diphtheria, 36; leprosy, 1; measles, 192; paratyphoid fever, 17; scarlet fever, 169; tuberculosis, 155, typhoid fever, 34. Population, 1,107,059.

JAMAICA

Smallpox (alastrim)—Other communicable diseases—August 1–28, 1926.—During the period August 1 to 28, 1926, 93 cases of smallpox, reported as alastrim, were reported in the island of Jamaica, occurring at localities other than Kingston. Cases of other communicable diseases were reported as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Cerebrospinal meningitis		1	Scarlet fever	1	
Chicken pox		5	Tuberculosis (pulmonary)	7	37
Measles	3	22	Typhoid fever	9	89
Ophthalmia neonatorum		1	Yaws		2
Pneumonia		9			

PANAMA CANAL

Communicable diseases—August, 1926—During the month of August, 1926, communicable diseases were reported in the Canal Zone and at Colon and Panama, as follows:

Disease	Canal Zone		Colon		Panama		Infected in other localities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Diphtheria	1		1		13	1	2		17	1
Dysentery	1				6	1		1	7	2
Hookworm disease					55	1			55	1
Leprosy		1								1
Malaria	139	1	5		17	3	32	2	193	6
Measles	1		3		23		2		29	
Pneumonia [1]		3		6		25		3		37
Tuberculosis [1]		4		6		22		3		35
Whooping cough	2		1		4		1		8	

[1] Only deaths reported.

PERU

Plague—August, 1926.—During the month of August, 1926, 21 cases of plague with 9 deaths were reported in Peru. The occurrence was in the Departments of Cajamarca and Lima and was distributed as follows: *Cajamarca*—In the Province of Contumaza, 1 case; *Lima*—Chancay Province, cases, 5, deaths, 2; Lima Province, at Chosica, cases, 6, deaths, 1; Lima City, cases, 2, deaths, 1; country district of Lima, cases, 7, deaths, 5.

SALVADOR

Quarantine against Guatemala—Smallpox.—According to information dated September 7, 1926, quarantine was in force at that date in the Republic of Salvador against arrivals from Guatemala on account of smallpox.

SIERRA LEONE

Sleeping sickness—August, 1926.—During the month of August, 1926, a case of sleeping sickness was reported in Sierra Leone, West Africa, occurring at Kpai, Kennema District.

UNION OF SOUTH AFRICA

Plague—Cape Province—Orange Free State—August 15–21, 1926.—During the week ended August 21, 1926, three cases of plague, occurring in Europeans, were reported in the Union of South Africa, of which two cases, fatal, occurred in the Cape Province, in Calvinia district, and one case in the Orange Free State, in Hoopstad district. The occurrence was on farms.

Smallpox.—New cases of smallpox were reported in Cape Province, August 15 to 21, 1926, in two districts.

Typhus fever—During the same period new cases of typhus fever were reported in the Transvaal Occurrence of typhus fever during the month of July, 1926, was reported as follows: *Cape Province*—Cases, 58, deaths, 15 *Natal*—Cases, 23, deaths 2 *Orange Free State*—Cases, 7 *Transvaal*—cases, 2. The occurrence was in the colored or native population

YUGOSLAVIA

Communicable diseases—August, 1926.—During the month of August, 1926, communicable diseases were reported in Yugoslavia as follows.

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	40	6	Measles	86	1
Cerebrospinal meningitis		1	Scarlet fever	326	31
Diphtheria	120	18	Tetanus	32	21
Dysentery	236	27	Typhoid fever	322	13
Glanders	2	2	Typhus fever	1	
Lethargic encephalitis	1		Whooping cough	215	153

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended October 15, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Amoy	Aug 22-Sept. 4	54		
Foochow	Aug 15-Sept 4			Present, not epidemic
Swatow	Aug 22-Sept. 4	16		
Tsingtao	Aug 30			American, 1 case, 1 death, Japanese settlement, 10 deaths; Chinese, 30 to 40 deaths daily, estimated.
Chosen				
North Heian Province	Sept 3-16	70	30	Deaths estimated
India				Aug. 1-7, 1926 Cases, 2,457, deaths, 1,577.
Madras	Aug 29-Sept. 4	1	1	
Philippine Islands				
Pampanga Province	July 25-31	1	1	
Siam				Aug. 15-21, 1926 Cases, 83, deaths, 62 Apr 1-Aug 21, 1926 Cases, 7,466, deaths, 4,907

PLAGUE

Place	Date	Cases	Deaths	Remarks
Azores				
Fayal Island—				
Horta	Aug 23-29	1	1	
British East Africa,				
Kenya—				
Kisumu	Aug 17	1		
India				Aug 1-7, 1926 Cases, 298; deaths, 185
Bombay	Aug 15-21	1	1	
Madras Presidency	Aug 8-14	69	46	
Peru				Aug, 1926 Cases, 21, deaths, 9.
Departments—				
Cajamarca				Aug., 1926 Cases, 1.
Contumazá Province	Aug 1-31	1		At Jandon

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended October 15, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Peru—Continued				
Departments—Continued				
Lima				Aug, 1926 Cases, 20, deaths, 9
Chancay Province—				
Huacho	Aug 1-31	3	1	
Huaral	do	2	1	
Lima Province—				
Chosica	do	6	1	
Lima City	do	2	1	
Country estates	do	7	5	
Turkey				
Constantinople	Aug 29-Sept 4	1	1	
Union of South Africa				
Cape Province—				
Calvinia District	Aug 15-21	2	2	In Europeans On farms
Orange Free State—				
Hoopstad District	do	1		European On farm

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Canada				
Alberta				Sept 19-25, 1926 Cases, 4
Calgary	Sept 19-25	5		
British Columbia—				
Vancouver	Sept 6-12	1		
Manitoba	Sept 19-25	1		
Ontario	do	3		Sept 1-30, 1926 Cases, 23, corresponding period, 1925—cases, 25
Peterboro	Sept 1-30	10		
Saskatchewan—				
Regina	Sept 19-25	1		
China:				
Chungking	Aug 15-21			Present
France:				
Paris	Sept. 1-10	2		
Great Britain				
England and Wales				Aug 29-Sept 18, 1926 Cases, 305
Sheffield	Sept 5-11	1		
India				Aug 1-7, 1926 Cases, 2,012, deaths, 637
Bombay	Aug 15-21	2	2	
Madras	Aug 29-Sept 4	6	2	
Jamaica				Aug 1-14, 1926 Cases, 31 Reported as alastrim
Mexico				
Guadalajara	Sept 14-27		2	
San Luis Potosi	Sept 19-25		1	
Siam				Aug 15-21, 1926 Cases, 18, deaths, 4 Apr 1-Aug 21, 1926 Cases, 544, deaths, 209
Union of South Africa				
Cape Province	Aug 15-21			Outbreaks

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	July 21-31	1		
Mexico:				
Mexico City	Sept 5-18	16		Including municipalities in Federal District.
Palestine:				
Jerusalem	Aug 31-Sept. 6	1		
Union of South Africa				July, 1926 Cases, 90, deaths, 17. Native
Cape Province				July, 1926: Cases, 58, deaths, 15.
Natal				July, 1926 Cases, 23, deaths, 2.
Orange Free State				July, 1926 Cases, 7.
Transvaal				July, 1926 Cases, 2
Do	Aug. 15-21			Outbreaks
Yugoslavia				Aug., 1926 1 case

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 8, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926 Cases, 31, deaths, 29
China				
Amoy	Aug 8-21	13		Stated to be present in epidemic form
Canton	June 1-30	38	14	
Nanking	July 25-Aug 7			Present
Shanghai	Reported July 20	35	8	
Do	July 25-Aug 28	32	327	Cases, foreign, deaths, native and foreign
Swatow	July 11-Aug 14	20	63	
Tsingtao	do	3	3	
Chosen				
Shingishu	Sept 13	19		Including places in vicinity
French Settlements in India				Mar 7-June 26, 1926 Cases, 31, deaths 30
India				Apr 25-June 26, 1926 Cases, 18,526, deaths, 11,531. June 27-July 31, 1926 Cases, 9,035, deaths, 5,587.
Bombay	May 30-June 5	1	1	
Do	July 18-31	2	2	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-Aug 21	242	215	
Madras	May 16-June 5	2	1	
Do	Aug 1-7	1	1	
Rangoon	May 9-June 26	67	44	
Do	June 27-Aug 8	28	27	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug 14	31	17	
Japan				To September 10, 1926 Cases, 35
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama.
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Wakayama	do	2		
Philippine Islands				
Manila	May 18-24	2	2	
Do	June 27-Aug 21	9	2	
Provinces—				
Albay	Apr 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb 21-Mar 6	3	3	
Rizal	July 18-24	1		
Romblon	Dec 14-31	42	43	
Do	Jan. 2-23	16	12	
Siam				Aug 1-7, 1926 Cases, 47, deaths, 38
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-Aug. 7	77	28	
Straits Settlements				
Singapore	July 4-17	2	1	
On vessel				
Steamship Macedonia	Aug 5	1		At Yokohama, Japan Vessel sailed from Singapore, July 18, 1926.

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria,				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported
Do	July 1-20	1		
Bona	Aug 14	1		
Philippeville	Sept 7	1		
Azores				
Fayal Island—				
Horta	Aug 2-8	1	1	
St Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 8, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
British East Africa				
Kisumu	May 16-22	1	1	
Uganda	Mar 1-May 31	414	322	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	
China				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug 7	28		
Foochow	June 6-July 31			Several cases Not epidemic
Nanking	May 9-Aug 7			Prevalent
Swatow	July 25-31	14		
Ecuador				January-June, 1926 Cases, 385, deaths, 154
Chimborazo	January-June	9	2	Rats taken, 766
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1-Aug 31	12	3	Rats taken, 41,321, found infected, 59
Leon	January-June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua. Rats taken, 1,542
Egypt				Jan. 1-Aug 12, 1926 Cases, 115
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkiah	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
France				
Marseille	July 8	1	1	Reported July 24
St. Denis	Reported Aug 2	1		Vicinity of Paris
St Ouen	Aug 14	2		Suburb of Paris
Great Britain				
Liverpool	Aug 29-Sept 4	2	1	
Greece				
Athens	Apr 1-May 31	16	4	Including Piræus
Do	Aug. 1-31	9	2	Do
Patras	May 27-June 12	4	1	
Do	July 25-Sept 4	7	4	
Zante	May 17	1		
Hawaii.				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Paauhau	July 18-24			Plague-infected rat trapped.
India				Apr 25-June 16, 1926 Cases, 53,001; deaths, 41,576 June 27-July 31, 1926 Cases, 1,107, deaths, 676
Bombay	May 2-June 26	16	15	
Do	July 18-Aug 14	4	4	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr. 25-June 26	162	93	
Do	July 4-Aug 7	195	93	
Rangoon	May 9-June 26	20	15	
Do	June 27-Aug 21	47	38	
Indo-China:				
Saigon	May 23-June 26	8	3	
Do	July 18-Aug 7	2	1	
Iraq				
Bagdad	Apr 18-June 12	161	108	
Do	July 18-31	2	2	
Japan:				
Yokohama	July 2-30	9	5	
Do	Aug 7	2		Total, July 2-Aug 10, 1926; Cases, 9; deaths, 8.
Java:				
Batavia	Apr 24-June 19	65	65	
Do	June 26-Aug 20	44	42	
Cheribon	Apr 11-24	3	3	
East Java and Madura	June 13-19	1	1	
Do	July 25-31	1	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 8, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Majunda Province	do	10	6	
Mananjary Province	do	1	1	
Moramanga Province	Apr 1-15	2	2	Do
Tananarive Province				Apr 1-June 30, 1926 Cases, 130, deaths, 120
Tamatave (Port)	May 16-31	1	1	
Tananarive Town	Apr 1-June 30	7	7	
Nigeria				Feb 1-Apr 30, 1926 Cases, 115, deaths, 92
Peru				May-June 1926 Cases, 37, deaths, 16
Departments—				
Ancash	May 1-31			Present
Cajamaica	May 1-June 30	10	4	
Huacho	July 1-31	1		
Huaral	do	5	2	
Huarmey	do			Do
Ica	May 1-31	1		
Libertad	do	4		Pacasmayo, cases, 2, Trujillo district, cases, 2
Lima	May 1-June 30	29	12	
Do	July 1-31	8	2	
Haciendas	do	7	3	
Piura	June 1-30	13		In Huancabamba district
Russia				Jan 1-Mar 31, 1926 Cases, 37
Senegal				Nov 1-30, 1926 Cases, 3 deaths, 2 Mar 1-Apr 30 1926 Cases, 15, deaths, 4
Siam				
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Do	July 4-17	1	1	
Syria				
Beirut	July 1-Aug. 10	2		
Tunisia	May 11-June 30	174		
Do	July 1-20	12		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Turkey				
Constantinople	Aug 1-28	4	1	
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug 14	2	1	
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District—				
Protestpan	May 9-22	3	3	
On vessel				
Steamship Zaria	Sept 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa Four plague infected rats found on board

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	14		
Do	July 1-Aug 31	3		
Belgium				
Antwerp	Aug. 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-31	2	4	
Brazil:				
Bahia	June 20-26	1		
Do	June 27-Aug 21	52	25	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-Aug 14	18	11	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 8, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Brazil—Continued				
Pernambuco	July 11-Aug 2	43	7	
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 4	1,823	897	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Canada				May 30-June 12, 1926: Cases 46.
Alberta	May 30-June 12	3		
Do	June 27-Sept 18	14		
Calgary	Sept 5-11	1		
British Columbia—				
Vancouver	Aug 16-22	2		
Manitoba				May 30-June 26, 1926 Cases, 24 June 27-Sept 11, 1926 Cases, 19
Winnipeg	June 6-12	5		
Do	July 4-Sept 4	12		
Ontario				May 30-June 26, 1926 Cases, 36. June 27-Sept 18 Cases, 78
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2		
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Toronto	July 18-Aug 11	8		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16 June 27-Sept 18 Cases, 59.
Regina	July 4-10	2		
Ceylon				Mar. 14-May 29, 1926. Cases, 44; deaths, 3
Chile:				
Antofagasta	June 6-12	1		
China:				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Changsha	Aug 8-14	1		
Chungking	May 2-Aug 7			Present
Foochow	do			Do
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-July 3	1		Do
Dairen	Apr 26-June 20	69	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do.
Harbin	May 14-June 30	21		Do.
Do	July 1-28	14		
Kai-yuan	May 16-June 30	10		Do.
Kungchuling	June 13-19	1		Do.
Liaoyang	May 16-June 30	4		Do.
Mukden	do	4		Do.
Penhsihu	May 16-June 19	4		Do
Ssupingkai	May 16-June 30	2		Do.
Teshihchiao	do	2		Do.
Wa-feng-tien	do	3		Do
Nanking	May 8-Aug 7			Present
Shanghai	May 2-June 26	10	25	Cases, foreign deaths, population of international concession, foreign and native.
Do	June 27-July 24	3	3	
Swatow	May 9-Aug 14			Sporadic.
Tientsin	June 2-26		1	Reported by British municipality.
Wanshien	May 1			Prevalent

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 8, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Chosen				Mar 1-May 31, 1926 Cases, 548; deaths, 121
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Aug 19	11	5	
Cairo	Jan 29-Apr 1	16	4	
Esthonia				May 1-June 30, 1926 Cases, 3
France				Mar 1-June 30, 1926 Cases, 141.
St Etienne	Apr 18-June 15	7	3	
French Settlements in India	Mar 7-June 26	282	282	
Gold Coast	Mar 1-May 31	662	13	
Great Britain				
England and Wales				May 23-June 26, 1926 Cases 933. June 27-Aug 28, 1926 Cases, 863
Bradford	May 23-29	1		
Do	Aug 29-Sept 4	1		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-17	1		
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Aug 7	2		
Greece				
Athens	July 1-31	71	6	Including Piræus
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr 25-June 26, 1926 Cases, 54,851, deaths, 14,771 June 27-July 31, 1926 Cases, 14,494, deaths, 4,513
Bombay	May 2-June 26	220	134	
Do	June 27-Aug 14	84	45	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-26	24	18	
Do	June 27-Aug 21	30	25	
Karachi	May 16-June 26	44	18	
Do	June 27-Aug 21	13	7	
Madras	May 16-June 26	7	4	
Do	June 27-Aug 28	38	12	
Rangoon	May 9-June 26	10	5	
Do	July 4-24	3		
Indo-China				
Saigon	May 9-June 26	2		
Iraq.				
Bagdad	do	8	3	
Do	July 4-10	1	1	
Basra	Apr 18-June 22	34	25	
Italy				Mar 28-June 26, 1926 Cases, 34. June 27-July 10, 1926 Cases, 3.
Catania	Aug 9-15	2		
Rome	June 14-20	4		Entire consular district, including island of Sardinia
Jamaica				Apr. 25-June 26, 1926 Cases, 201. (Reported as alastrim)
Do				June 27-Aug 28, 1926 Cases, 147. (Reported as alastrim.)
Japan				Apr 11-June 19, 1926 Cases, 641.
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug 10	2		
Tokyo	June 28-July 17	3		
Yokohama	May 2-8	2		
Java:				
Batavia	May 15-June 25	2		Province
Do	July 24-Aug 20	3		Do.
East Java and Madura	Apr 11-July 3	100	6	
Do	July 4-Aug 7	43	1	
Malang	Apr 4-10	6	1	Interior.
Surabaya	May 16-22	14	1	
Do	July 18-24	15	1	
Latvia				Apr 1-June 30, 1926, Cases, 5.
Mexico				Feb 1-Apr 30, 1926 Deaths, 982.
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-Aug 30		6	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
Do	July 25-Aug 28	4		Do

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 8, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Mexico—Continued				
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-Sept 4		10	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Do	July 1-Aug 31		9	
Netherlands				
Amsterdam	July 18-24		9	
Nigeria				Feb. 1-Apr 30, 1926: Cases, 404; deaths, 33
Persia				
Teheran	Apr 21-June 22		7	
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May 1, 1926 Cases, 12 deaths, 1 June 27-July 24, 1926 Cases, 2, deaths, 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Sept 11	21	6	
Oporto	May 23-June 5	4		
Do	July 11-24	2		
Russia				Jan 1-Mar 31, 1926 Cases, 2,103
Siam				Aug 1-7, 1926 Cases, 12, deaths, 8
Bangkok	May 2-June 12	23	20	
Do	July 4-Aug. 7	43	39	
Spain:				
Valencia	Aug 22-28	1		
Straits Settlements:				
Singapore	Apr. 25-May 1	1		
Do	July 11-17	1		
Switzerland				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tripolitania	Apr 1-30	11		
Tunisia				Apr. 1-June 30, 1926 Cases, 17.
Tunis	Aug. 11-30	2		
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks.
Idutywa district	May 23-29			Do
Orange Free State	June 20-July 3			Do
Natal	May 30-June 5			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Johannesburg	May 9-June 12	5		
Do	July 11-17	1		
Yugoslavia				Apr 15-30, 1926 Cases, 2, deaths, 1
Zagreb	Aug 9-15	2		
On vessels:				
S. S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed. At Durban, Union of South Africa, June 16, 1926: One suspect case landed.
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Do	Aug 1-31	2		
Argentina				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Bulgaria				Mar. 1-June 30, 1926. Cases, 87; deaths, 14.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 8, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Chile.				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Valparaiso	Apr. 29-May 5		1	
Do	Aug 14-28	3		
China				
Antung	June 14-27	7	1	
Do	June 28-Aug 29	26	1	
Canton	May 1-31	1		
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1-May 31, 1926: Cases, 887, deaths, 91.
Chemulpo	May 1-June 30	38	2	
Do	July 1-31	7	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Do	July 1-31	7		
Czechoslovakia				Jan 1-June 30, 1926: Cases, 156; deaths, 6.
Egypt				
Alexandria	July 16-Aug 19	3		
Cairo	Jan 29-Mar 4	74	17	
Do	July 23-Aug 5	1		
Port Said	June 4-24	4	1	
Do	July 9-Aug 19	4	1	
Great Britain				
Scotland—				
Glasgow	July 30-Aug 21	9	1	
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerr County—				
Dingle	June 27-July 3	1		
Italy				Mar. 28-May 8, 1926 Cases, 3.
Japan				Mar. 28-May 29, 1926 Cases, 37.
Latvia				May 1-June 30, 1926 Cases, 19.
Lithuania				Mar. 1-June 30, 1926 Cases, 199, deaths, 22.
Mexico				Feb 1-Apr. 30, 1926 Deaths, 110.
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in federal district.
Do	June 13-19	9		Do.
Do	July 25-31	3		Do.
Do	Aug. 15-Sept. 4	15		Do.
San Luis Potosi	June 13-26			Present, city and country.
Morocco				Mar 1-June 30, 1926 Cases, 426.
Palestine				Mar. 1-June 30, 1926 Cases, 14; deaths, 1. Aug. 10-16, 1926: Cases, 2.
Gaza	July 6-12	1		
Haifa	July 13-Aug 30	5		
Halalal	Aug. 17-23	1		
Jaffa district	June 15-28	5		
Majdal district	July 13-Aug 2	2		
Nazareth district	do	3		
Tiberias	Aug 3-9	1		
Yavniel	Aug. 17-23	1		
Persia				
Teheran	May 23-June 22		1	
Peru				
Arequipa	Jan. 1-31		2	
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85 June 27-July 24, 1926, Cases, 147, deaths, 11
Rumania				Mar 1-May 31, 1926 Cases, 711, deaths, 69
Russia				Jan 1-Mar 31, 1926 Cases, 14,814
Tunisia				Apr 1-June 30, 1926 Cases, 110.
Tunis	June 11-30	3		
Turkey				
Constantinople	June 16-22	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 8, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				Apr. 1-May 31, 1926. Cases, 153; deaths, 19
Cape Province				Apr. 1-June 30, 1926 Cases, 202, deaths, 24 native
[illegible] district	June 27-July 3			
[illegible]	do	1		Outbreaks
Natal				Apr 1-June 30, 1926 Cases, 28
Durban	July 25-Aug 7	9	1	July 25-31, 1926 Cases, 11 In native compounds
Orange Free State				Apr. 1-June 30, 1926 Cases, 24; deaths, 4
Do.	July 18-24			Outbreaks
Transvaal				Apr. 1-June 30, 1926 Cases, 10, deaths, 5 Aug 1-7, 1926 Outbreaks
Wakkerstroom district	June 20-26			Outbreaks
Wolmaransstad district	do.			Do.
Yugoslavia				Apr. 15-June 30, 1926 Cases, 48, deaths, 7 July 1-31, 1926: Cases, 2, deaths, 1
Zagreb	May 15-21	1		

YELLOW FEVER

Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do.	July 4-10	1		
Gold Coast	Apr 1-May 31	6	3	

TREASURY DEPARTMENT

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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C C PIERCE, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912

They contain (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world (2) Articles relating to the cause, prevention, or control of disease (3) Other pertinent information regarding sanitation and the conservation of the public health

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PUBLIC HEALTH REPORTS

VOL. 41 OCTOBER 22, 1926 NO. 43

COOPERATIVE RURAL HEALTH WORK OF THE PUBLIC HEALTH SERVICE IN THE FISCAL YEAR 1926[1]

By L. L. Lumsden, Surgeon, United States Public Health Service

In the fiscal year ended June 30, 1926, the United States Public Health Service cooperated in demonstration projects in rural health work in 89 counties, or districts comparable to counties in 20 States, as follows

Alabama.—Colbert, Franklin, Jackson, Lauderdale, Lawrence, Limestone, Madison, Talladega, and Walker Counties

Arkansas.—Jefferson and Pulaski Counties

California.—San Diego and Santa Barbara Counties, and San Joaquin district

Georgia.—Baker, Decatur, Floyd, Glynn, Grady, Laurens, Miller, and Walker Counties

Illinois.—Crawford County.

Iowa.—Dubuque County

Kansas.—Jefferson, Lyon, McPherson, and Ottawa Counties.

Kentucky.—Mason County.

Louisiana.—La Fourche and Washington Parishes

Massachusetts.—Cape Cod district.

Mississippi.—Harrison, Hinds, and Washington Counties.

Missouri.—Dunklin, Gentry, Greene, Holt, Jackson, Marion, New Madrid, Nodaway, Pemiscot, Pettis, Polk, St. Francois, and St. Louis Counties.

Montana.—Cascade and Lewis and Clark Counties

New Mexico.—Bernalillo, Chaves, Dona Ana, Eddy, McKinley, Santa Fe, Union, and Valencia Counties.

North Carolina.—Edgecombe County.

Oklahoma.—Oklahoma, Okmulgee, and Ottawa Counties

South Carolina.—Georgetown County.

Tennessee.—Gibson, Hamilton, Morgan, Obion, Rhea, and Weakley Counties.

Virginia.—Carroll, Charlotte, Chesterfield, Greensville, Henry, Nansemond, Prince Edward, Pulaski, Roanoke, Smyth, Washington, and Wise Counties.

[1] This report applies to work in rural sanitation which is conducted in support of and as a part of whole-time local official health service It does not include all cooperative activities of the Public Health Service in rural communities

9276°—26——1

West Virginia.—Gilmer, Hancock, Harrison, Logan, Marion, Marshall, Preston, and Roane Counties.

The results were thoroughly in line with the conclusions in the reports on this activity for the fiscal years 1920,[2] 1921,[3] 1922,[4] 1923,[5] 1924,[6] and 1925.[7]

Plan of Work

The plan of the work was the same as that carried out in the six preceding fiscal years and is described in previous reports (Reprints Nos. 615, 699, 887, 964, and 1047.)

The authorization for this work is in the act of February 15, 1893 (ch. 114, 27 Stat. L. 449); the act of August 14, 1912 (ch. 288, 37 Stat. L. 309); and in the annual appropriation acts. The appropriation is specifically for "special studies of and demonstration work in rural sanitation."

The work is conducted in cooperation with State and local health authorities. It is made a part of a well-rounded comprehensive program of local health service. Experience has taught that under such arrangement the work can be carried out more economically and with better and more lasting results than if conducted as a separate specialized activity.

Through such connection as this with county health service projects, the Public Health Service can perform most economically and efficiently toward meeting its responsibility in helping prevent the spread of human infection in interstate traffic. The cooperative projects also furnish most favorable opportunities for studies, by the Public Health Service, "of the diseases of man and conditions influencing the propagation and spread thereof." Thus, this rural sanitation activity serves a number of important general purposes besides those specified in the appropriating act and, though very limited as yet in extent, it does contribute to that essential part of the work of the Federal Government to promote the general welfare.

The demonstration work in rural sanitation can not, under the provisions of the appropriating act, be conducted in a community unless the State, county, or municipality in which the community is located, agrees to pay at least one-half the expenses of such demonstration work. The funds provided by the State, county, and municipalities, together, for support of the average demonstration project far exceed the allotment from the Federal fund, and in almost all instances the appropriation from the local official sources (county, township, or town) covers considerably more than 50 per cent of the budget.

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[2] Reprint No. 615, from Public Health Reports of Oct. 1, 1920, p. 15.
[3] Reprint No. 699, from Public Health Reports of Oct. 7, 1921, p. 17.
[4] Reprint No. 786, from Public Health Reports of Sept. 29, 1922, p. 22.
[5] Reprint No. 887, from Public Health Reports of Dec. 14, 1923, p. 24.
[6] Reprint No. 964, from Public Health Reports of Oct. 17, 1924, p. 23.
[7] Reprint No. 1047, from Public Health Reports of Oct. 23, 1925, p. 33.

The county, as a rule, is the unit for the work Under the cooperative arrangements, a good program of health work can be carried out in practically any rural county in the United States at a cost to the county readily within its means The average cooperative demonstration project is conducted on a cost basis of less than 50 cents per capita of population served and furnishes a striking example of efficiency with economy in public service By having all salient branches of health work for the community conducted under the direction of one head, the whole-time county health officer, who is given a status of field agent in the United States Public Health Service and in some of the States that of deputy State health officer, a maximum of service can be rendered with a minimum of overhead expense, lost motion, and friction Through good business management, every dollar invested in the enterprise can be made to yield a remarkable dividend in the protection and promotion of human health, and in a money saving to the community amounting to many times the cost of the service

This plan of cooperative rural health work has been evolved in the course of field experience and has been tested under a wide range of local conditions It seems applicable to all the rural districts of the United States. The provision of means for a reasonably rapid extension of this work would, according to all the evidence, prove highly advantageous from every standpoint—individual, community, State, and national

Appropriation

The appropriation for the rural sanitation work of the Public Health Service in the fiscal year 1926 was $75,000. Against the amount appropriated was set up a budget saving of $2,000. The unexpended balance from the operations of the preceding fiscal year was $10,055.55.[8] Thus, $83,055.55 was available.

Rural health work is applicable to communities in the United States comprising over 60 per cent (or over 70,000,000) of our total population Such communities include strictly country homes, incorporated towns and villages (with populations under 2,500), and, as the county is the logical political unit for official rural health-work administration, many towns and cities with populations from 2,500 to 50,000.

Under modern conditions of transportation and travel, rural and urban health conditions react upon each other. Therefore rural health work is of importance to our entire urban population. The sanitary quality of the tremendous volume of raw foods now shipped

[8] This balance was due not to an excessive amount of money being available but to temporary suspensions of the work and consequent decreased expenditure in some of the projects to which allotments had been made for the whole fiscal year 1925. Such suspensions are necessitated by various local circumstances and can not be anticipated when the contracts are made With the existing differences between the Federal fiscal year and the fiscal years of some of the States and localities in which the work is conducted it would not be practicable, without lessening the degree of economy striven for, to arrange contracts so that the allotment of Federal funds to every project would be expended exactly by the end of the Federal fiscal year

daily through interstate traffic is of keen importance, for both humane and business reasons, to our public and our private interests and should be enhanced and safeguarded by reasonably adequate, coordinated, joint activities of governmental agencies—local, State, and Federal To undertake sanitary control of traffic and travel by inspection and quarantine at our city borders and on our interstate lines now would be futile and ridiculous The efficient local health department, in doing its local work, performs duty of state-wide and nation-wide importance with which the State and the Federal health services are concerned Therefore it seems, from a sanitary standpoint, reasonable and proper for State and Federal agencies to encourage and help in the development and permanent maintenance of such departments

Less than 16 per cent of our rural population is as yet provided with local health service approaching adequacy under the direction of whole-time, local (county or district) health officers.[9] Because of lack of efficient, whole-time rural health service, infections of man are conveyed very frequently across interstate lines.

In our rural communities there are about 1,000,000 persons incapacitated all the time by illness, much of which is preventable; about 70 per cent of the school children are handicapped by physical defects, most of which are preventable or remediable; about 30 per cent of persons of military age are incapacitated for arduous productive labor or for general military duty, largely from preventable causes; and over 60 per cent of the men and women between 40 and 60 years of age are in serious need of physical reparation, largely as a result of preventable causes. In view of these conditions, there is no room for reasonable doubt about the need for more and better rural health service in this country.

The results of efficient health service are in life saving, disease prevention, health promotion, and economic saving The saving in dollars and cents amounts to many times over the cost of the service. Most of our rural county governments are not disposed to establish reasonably adequate county health service without an offer of financial assistance and competent counsel from some outside agency.

The amount appropriated for cooperative rural sanitation work in the average fiscal year of the last four years has been less than one forty-thousandth of the total congressional appropriation and less than 1 per cent of the sum appropriated for all the activities of the United States Public Health Service.

Expenditures

The expenditures in the fiscal year 1926 totaled $82,545 64 Of this sum $78,063.37 was expended in allotments for direct support of cooperative projects in counties or districts, and $4,482.27 was

[9] Reprint No 1079 from Public Health Reports of May 7, 1926.

expended for general administration, supervision of local projects, and special studies of the problem of rural sanitation.

With the increasing general interest in whole-time, rural health service, the demands upon the Public Health Service for cooperation far exceeded the money ($83,055 55) available for allotment In view of the overwhelming number of insistent and yet thoroughly reasonable requests from State and local authorities for cooperation, extreme care had to be exercised to prevent an overcommitment of the funds. The balance remaining at the end of the fiscal year was $509 91 [10]

For the support of the work in the 89 local projects the expenditures from all sources totaled $856,962 38 Of this sum $78,063 37 was allotted from the rural sanitation funds of the Public Health Service, an aggregate of $702,160 48 was derived from State, county, and municipal governmental sources, and $76,738 53 was derived from other sources, including local health associations, tuberculosis associations, local Red Cross chapters, the International Health Board, and the Children's Bureau of the United States Department of Labor Thus, this investment of the Federal funds appropriated for rural sanitation work was met with odds of almost 10 to 1

It is both significant and encouraging that organizations entering the public-health field to promote or conduct some specialized activity—such as typhoid fever prevention, hookworm control, tuberculosis prevention, trachoma control, malaria control, venereal-disease prevention, or advancement of child and maternity hygiene—realize, after practical experience, the advantage of dovetailing their specific activities in with and making them a part of a well-rounded, comprehensive program of local official health service under the immediate direction of a qualified, whole-time local health officer. Such arrangement is obviously in the interest of efficiency with economy in public health-work in our rural districts.

Compiled Data

The expenditures from the different sources for support of the cooperative demonstration projects, the scope, the principal activities, and some of the results of the work are presented in the accompanying tabular statement.

In attempting to measure the efficiency of health service, consideration is to be given to the local conditions—climatic, topographical, geographical, social, economic, and other—under which the work is done, the duration, nature, and scope of the activities, the cost of the service, and the results achieved. The 89 cooperative projects

[10] This balance will be reduced considerably by payment of bills yet to be received for freightage and telegraphing within the fiscal year.

listed in this tabular statement present a very wide range of local conditions. From equivalent, well-directed efforts much larger results are obtainable in one project than in another. Considering the cost of the service, the activities and results reported, and the findings from direct surveys of the situations by representatives of the Public Health Service and the State boards of health concerned, it is apparent that in the fiscal year 1926 some of the projects were highly successful, others were not up to reasonable expectations, and the average was good In rural health work, as in other business, the personal equation of the director of the unit is the main factor making for success or failure

A careful, analytical, and comparative study of the data in the table should be of interest to anyone competent to make such a study, and should be of especial interest to existing and prospective whole-time county (or local district) health officers.

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926

Counties (or districts)	Baker, Ga	Bernalillo, N Mex	Cape Cod Health District, Mass	Cascade, Mont	Chaves, N Mex	Colbert, Ala	Crawford, Ill	Decatur, Ga	Dona Ana, N Mex	Dubuque, Iowa	Dunklin, Mo.
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1925	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to Dec 31, 1925	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926
A. EXPENDITURES											
1. Rural sanitation fund (P H S.)	$1,000 00	$300.00	$2,499 96	$1,800 00	$300 00	$600 00	$1,200 00	$922 50	$299 94	$300 00	$600 00
2 State	1,000 00				250 00	4,836 69	300 00	1,000 00			1,875 00
3 County	1,939.12	11,120 66		8,428, 36	7,207 67	5,332 19	2,071 38	5,652 18	7,443 82	1,589 88	4,195 63
4 Municipalities			5,403 11	8,428 36		3,676 52				10,877 42	
5. Other agencies				1,650 00	818 07				650 00	1,940 00	900 00
Total	3,939 12	11,420 66	7,903 07	20,306 72	8,575 74	14,445 70	3,574 38	7,574 68	8,393 76	17,707 30	7,570 63
B ACTIVITIES											
1. Educational											
(a) Lectures	9	23	48	28	6	69	5	26	115	65	110
(b) Attendance	1,050	1,027	1,892	2,660	175	3,708	372	1,531	1,894	5,804	4,317
(c) Bulletins distributed	1,020	487	30	19,780	3,901	3,288	1,265	1,251	1,326	10,505	10,561
(d) Newspaper articles	24	341	40	22	19	38	40	31	34	33	179
(e) Circular letters	1	863	10	3,237		2,362	368	191	447	1,187	2,692
(f) Health exhibits	4			5			3	11	1		1
2 Sanitary inspections											
(a) Private premises	1,043	2,408	172	959	4,602	1,686	34	320	846	785	144
(b) Public premises—schools, churches, stores, camps, etc.	280	8,761	525	665	548	263	71	74	989	820	105
3. Special inspections											
(a) Dairies		202	846	77	91	147	12		164	193	
(b) Other food-producing or food-handling places	81	626	54	286	111	6,385	10			642	
4. Examinations											
(a) For life extension advice						127	1				83
(b) For marriage licenses						2					
(c) For work certificates (children)			29				7				
(d) For lunacy				1	1	5			14		14
(e) Of prisoners		3				21			30		67
(f) Of food handlers	1	1,081			68	50	1				
5 Acute communicable disease control											
(a) Visits to cases, carriers, contacts, or suspects	22	6,615	343	3,828	4,929	115	60	94	1,320	316	313
(b) Cases or carriers quarantined	2	1,577	361	2,904	847	200	45	89	643	101	59

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Baker, Ga	Bernalillo, N Mex.	Cape Cod Health District, Mass	Cascade, Mont	Chaves, N Mex	Colbert, Ala	Crawford, Ill	Decatur, Ga	Dona Ana, N Mex	Dubuque, Iowa	Dunklin, Mo
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1925	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to Dec 31, 1925	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926
B ACTIVITIES continued											
6 Venereal-disease control											
(a) Suspects examined	3	22	7	15	28	119	3	19	1	156	56
(b) Prophylactic treatments			1			5					
(c) Curative treatments	14	227	2	274		112	161	21		809	31
7 Tuberculosis control											
(a) Number examined			39	101	2	35	15	5	2	51	36
(b) Positive			9	48	2	31	3	2	2	8	9
(c) Negative			30	53		4	12	3		43	27
(d) Placed in institutions				21							2
(e) Home visits			308	286	4	210	90		28	62	84
8 Persons treated for removal of hookworm	199							446			
9 Persons treated for prevention or cure of goiter				(1)						160	6
10 Schick tests				823							
11 Cows tuberculin tested		1,205	681		1,353	779			2,346	2,026	
12 Immunization											
(a) Complete antityphoid inoculations	458	145	14	19	33	971	239	424	174	2	36
(b) Antismallpox vaccinations	580	2,276	498	1,022	2,444	292	3	1,988	173	3	207
(c) Complete diphtheria toxin antitoxin inoculations	848	201	46	2,652	3			686	13	222	41
(d) Persons treated with antitoxin for immediate protection against diphtheria	13	57	45	2	21	2		5	25	72	1
13. Child hygiene											
(a) Prenatal											
(1) Cases given advice			60		18	71		1	172	65	37
(2) Examinations						11				55	13
(3) Office consultations			24	1		5					
(4) Group conferences			12			34				5	
(5) Home visits			114	5	20	81			176	380	
(6) Midwives instructed	11	37				27		27	50		
(b) Infant and preschool—											
(1) Babies and children examined	56	1	224	438	36	584	194	82	59	239	1,597
(2) Office consultations, mothers	3	3	54	80	46	6	3	60	5	13	158
(3) Group conferences with mothers	4		17	12		107	3	11			29
(4) Home visits	5		766	163	89	315	7	108	3,057	2,158	104

(c) School –											
(1) Children examined	617	2	2,476	6,161	1,645	2,134	1,835	3,870	98	7,075	6,198
(2) Found defective	340	2	1,299	5,194	728	914	697	1,611	44	5,113	1,408
(3) Defects found	451	3	1,469	9,792	958	1,136	859	2,188	48	[illegible],829	6,067
(4) Consultations, parents (office and school)	2,874	3	110	143	110	14	9	1,984	80	301	300
(5) Home visits	1,727		2,148	324	265	157	16	803	1	860	397
(6) Talks to classes or drills in hygiene	119	17	156	64	156		61	216	16	[illegible]	90
(7) Exclusions for communicable disease		1,858	314	2,013	868	28	26	39	158	40	97
(d) Nutritional classes – (1) Cases attending										1,016	
14 Antimalaria work	(2)	(4)	(3)	(3)	(3)	(2)	(3)	(4)	(3)	(1)	(3)
15 Laboratory examinations											
(a) Positive	141	353	68	405	458	138	48	438	103	312	40
(b) Negative	164	3,749	129	2,272	1,412	363	106	794	428	3,052	130
Total	305	4,102	197	2,677	1,600	501	154	1,232	531	4,401	170
C. RESULTS											
1 Sanitary privies installed											
(a) Septic or L. R. S.										5	
(b) Water-tight vault											
(c) Bucket and box									2		
(d) Pit	78	99			49	317		377	154	5	84
Total	78	99			49	317		377	156	10	84
2 Privies restored to sanitary type	1	94	4	114	217	8	19	17	607	51	
3 Septic tanks installed	3	7	111	2	19	11		16	16	17	
4 New sewer connections	6	288	2	132	46	51		43	14	362	
5 New water connections	2	272	200	56	55			1	145	399	
6 Wells or springs improved	46	12		10	10		15	6	21	12	
7 Public milk supplies radically improved		11	1	1	14		5		9	25	
8 Treatments induced for correction of physical defects											
(a) In infants			50		5	2	2	4	55		
(b) In preschool children			81	5	2	8		1	47	324	75
(c) In school children	21	2	401	1,970	65	252	70	252	23	1,895	1,145
(d) In adults			19		6	4			19		87
9 Nutritional cases improved			6	10	2	96	1	1	1,205	1,016	
10 Convictions for violation of sanitary laws		9	1		5	3				4	2
11. Nuisances corrected	6	2,123	77		1,673	563	8	6	850	609	34

[1] 68 per cent of school children and families using iodized salt. [2] Considerable [3] None [4] Little

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Eddy, N Mex	Edgecombe, N C	Floyd, Ga	Franklin, Ala.	Gentry, Mo	Georgetown, S C	Gibson, Tenn	Gilmer, W Va	Glynn, Ga	Grady, Ga
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to Oct 31, 1925	July 1, 1925, to Aug 31, 1925	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Feb 1, 1926, to June 30, 1926
A. EXPENDITURES										
Rural sanitation fund (P. H. S)	$260 25	$999 93	$300 00	$300 00	$200 00	$400 00	$500 00	$324 99	$300 00	$391 66
State	375 00	2,907 54		2,550 00	680 00	445 25	3,513 17	3,973 49		416 67
County	5,656 17	7,041 88	6,979 21	3,438 41	1,106 00	250 00	5,492 21	3,973 63	12,702 59	771 67
Municipalities			2,250 00							
Other agencies	642 03			1,680 00	280 00		3,513 17			
Total	6,933 45	10,952 35	9,529 21	7,968 11	2,266 00	1,095 25	13,018 55	8,272 11	13,002 59	1,580 00
B. ACTIVITIES										
1. Educational:										
(a) Lectures	53	35		128	40	1	124	120	79	12
(b) Attendance	2,528	2,713		9,061	948	36	8,716	6,012	1,209	1,150
(c) Bulletins distributed	2,539	1,145	9,116	7,754	2,222	6,790	1,035	6,108	4,164	850
(d) Newspaper articles	411	26	33	17	10	14	19	47	26	14
(e) Circular letters	304	1,514		4,393	167	75	200	6,370	791	
(f) Health exhibits	5	31	1		3	2	2	3	1	1
2. Sanitary inspections										
(a) Private premises	210	1,237	313	1,729	15	48	187	18	29,050	15
(b) Public premises—schools, churches, stores, camps, etc	115	546	200	369	47	4	42	10	205	12
3. Special inspections:										
(a) Dairies	34	37	12		2		11		198	
(b) Other food-producing or food-handling places	113	1,418		249	2	10	225	17	1,045	
4. Examinations										
(a) For life-extension advice		165		18	14	13	29	239	12	
(b) For marriage licenses		130		26		1				
(c) For work certificates (children)		56	275						54	
(d) For lunacy	1	19		5			8	3		
(e) Of prisoners	5	211		15				41	5	
(f) Of food handlers	255	21		3		8		5	280	
5. Acute communicable disease control:										
(a) Visits to cases, carriers, contacts, or suspects	189	209	926	120	43	25	955	127	672	9
(b) Cases or carriers quarantined	201	300	286	101	29	1	378	118	112	6

6 Venereal disease control										
(a) Suspects examined	1	248	47	74		5	62	16	525	1
(b) Prophylactic treatments		54								
(c) Curative treatments		389	190	53			384	1,152	401	
7. Tuberculosis control										
(a) Number examined	3	216	10	53	3	13	25	97	103	
(b) Positive	3	125	3	36	2	4	10	15	8	
(c) Negative		91	7	17	1	9	15	82	95	
(d) Placed in institutions	2	74				1	3	2	3	
(e) Home visits	14	991	579	81		23	150	11	180	
8 Persons treated for removal of hookworm		5		52					95	584
9 Persons treated for prevention or cure of goiter				3	5		1	1,231		
10 Schick tests										
11. Cows tuberculin tested				3			141		560	
12 Immunization										
(a) Complete antityphoid inoculations	64	715	2,907	2,425	18		4,881	1,851	2,518	285
(b) Antismallpox vaccinations	200	941	4,216	43			3,071	3	1,831	34
(c) Complete diphtheria toxin-antitoxin inoculations		9	32	231			462	362	71	84
(d) Persons treated with antitoxin for immediate protection against diphtheria		70	6	8			2	3	64	
13 Child hygiene										
(a) Prenatal—										
(1) Cases given advice	50	498	81	160	45	3	17	16	220	
(2) Examinations	21	3				1	13	2	1	16
(3) Office consultations	16	20		3		2		10	20	
(4) Group conferences	38	150								
(5) Home visits	58	502	555	170	4	3	52	6	217	
(6) Midwives instructed	62	161		4		40			13	
(b) Infant and preschool—										
(1) Babies and children examined	978	128		471	121	40	167	51	60	24
(2) Office consultations, mothers	113	15	70	52	86	15	15	46	18	2
(3) Group conferences with mothers	18	58		56	9	15				5
(4) Home visits	365	654	392	1,018	27	20	187	47	242	
(c) School—										
(1) Children examined	2,584	1,454	4,579	3,618	529	82	2,480	280	1,393	473
(2) Found defective	2,112	782	1,375	1,062	285	72	1,604	239	709	349
(3) Defects found	4,266	1,150	1,590	2,362	511	91	2,775	671	986	308
(4) Consultations, parents (office and school)	57	13	107	190	108	28	3	34	171	1,176
(5) Home visits	80	5	416	407	158	105	72	15	1,321	11
(6) Talks to classes or drills in hygiene	78	20		12	26		7	14	5	41
(7) Exclusions for communicable disease	69	13	30	12	54		67	20	192	
(d) Nutritional classes—cases attending									71	
14 Antimalaria work	(3)	(3)	(4)	(2)	(3)	(2)	(2)	(3)	(2)	(2)
15 Laboratory examinations										
(a) Positive	40	171	36	66	15	6	60	81	261	355
(b) Negative	70	317	123	161	13	142	357	87	894	152
Total	110	488	159	227	28	148	417	168	1,155	507

[2] Considerable [3] None [4] Little

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Eddy, N Mex	Edgecombe, N. C.	Floyd, Ga	Franklin, Ala	Gentry, Mo	Georgetown, S. C.	Gibson, Tenn	Gilmer, W Va	Glynn, Ga	Grady, Ga
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to Oct 31, 1925	July 1, 1925, to Aug 31, 1925	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Feb 1, 1926, to June 30, 1926
C RESULTS										
1. Sanitary privies installed.										
(a) Septic or L R. S									29	
(b) Water-tight vault										
(c) Bucket and box										
(d) Pit		100	165	44	23	8	296	1		1
Total		100	165	44	23	8	296	1	29	1
2 Privies restored to sanitary type		58	177	8	17	10	8		211	
3 Septic tanks installed			20	7			3		66	1
4 New sewer connections		15	207	55	5	7	251			
5 New water connections		3	232	109	10	10	99			
6 Wells or springs improved	5	8		1	12	13	9			1
7 Public milk supplies radically improved	32								22	
8. Treatments induced for correction of physical defects.										
(a) In infants				13	5	8			16	
(b) In preschool children	7	2		56	4	18		6	30	2
(c) In school children	1,796	14	605	619	116	78	125	85	135	7
(d) In adults	6			7		7	3	67	2	
9 Nutritional cases improved	5			324	25	10	3		93	
10 Convictions for violation of sanitary laws				3						
11 Nuisances corrected	15	11	154	930	12	3	2		66	2

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Greene, Mo.	Hamilton, Tenn	Hancock, W Va	Harrison, W Va	Harrison, Miss	Hinds, Miss	Holt, Mo	Jackson, Ala	Jackson, Mo	Jefferson, Ark
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	Jan 1, 1926, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Mar 1, 1926, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 16, 1925, to June 30, 1926
A EXPENDITURES										
Rural sanitation fund (P H S)	$158 30	$954 43	$1,737 46	$1,000 00	$2,100 00	$600 00	$400 00	$1,249 99	$600 00	$1,437 50
State	2,312 50	355 50	2,277 28		1,021 97	2,422 56	200 00	1,177 57	3,243 31	500.00
County	4,500.00	4,087 41	2,877 36	11,559 51	14,001 33	9,334 27	1,163 84	4,568 14	7,518 86	2,276 73
Municipalities	6,820.00				2,412 25	10,041 50				2,420 00
Other agencies	2,430 00	355 50	1,162 46	1,072 77		2,572 56	600 00	1,056 66	35 00	4,040 00
Total	16,220 80	5,752 84	8,054 56	13,632 28	19,535 55	24,970 89	2,363 84	8,052 36	11,397 17	10,674 23
B. ACTIVITIES										
1 Educational										
(a) Lectures	52	217	86	523	82	138	30	62	254	57
(b) Attendance	3,014	12,148	2,070	13,198	3,957	10,424	649	3,417	39,957	4,138
(c) Bulletins distributed	3,215	1,993	4,054	15,923	2,942	5,073	42	4,866	67,195	2,976
(d) Newspaper articles	100	61	63		340	150	2	38	246	43
(e) Circular letters	2,634	330	1,814	305	962	7,486		56	25,081	2,386
(f) Health exhibits	22	3	3	1		3		2	5	21
2 Sanitary inspections										
(a) Private premises	25	1,163	47	1,000	11,415	6,610		2,128	222	612
(b) Public premises—schools, churches, stores, camps, etc	74	50	60	195	2,854	101	18	109	500	28
3 Special inspections										
(a) Dairies	142	20	47	53	63	482		20	15	336
(b) Other food producing or food handling places		50		52	216	6,719		200	9	1,422
4 Examinations										
(a) For life extension advice	30	142			215	72		7	49	63
(b) For marriage licenses										
(c) For work certificates (children)	1	147	5	1	2					6
(d) For lunacy	32	12	16	7			2			39
(e) Of prisoners	22	13	107	300			9			30
(f) Of food handlers					281				1	
5 Acute communicable disease control										
(a) Visits to cases, carriers, contacts, or suspects	2,358	195	755	551	330	192	21	160	2,495	760
(b) Cases or carriers quarantined	335	84	201	196	445	89	15	115	872	80
6 Venereal disease control										
(a) Suspects examined	209	42	11	108	29	33		2	3	103
(b) Prophylactic treatments			4							
(c) Curative treatments	1,849	101	111	280	161					182

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Greene, Mo.	Hamilton, Tenn.	Hancock, W. Va.	Harrison, W. Va.	Harrison, Miss.	Hinds, Miss.	Holt, Mo.	Jackson, Ala.	Jackson, Mo.	Jefferson, Ark.
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	Jan. 1, 1926, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Mar. 1, 1926, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 16, 1925, to June 30, 1926
B. ACTIVITIES—continued										
7. Tuberculosis control.										
(a) Number examined	161	457	82	136	32	70	1	12	38	66
(b) Positive	76	47	23	20	18	21		12	33	53
(c) Negative	85	410	59	116	14	26	1		5	13
(d) Placed in institutions	33	17	6	6	5	2			1	5
(e) Home visits	232	243	77	263	49	102	2	68	29	305
8. Persons treated for removal of hookworm					157	17				
9. Persons treated for prevention or cure of goiter	15		512		40					
10. Schick tests		388			18	1,918				
11. Cows tuberculin tested			612		921			185		92
12. Immunization										
(a) Complete antityphoid inoculations	6	1,059	1	400	20	1,479		6,397	2	50
(b) Antismallpox vaccinations	97	1,701	577	2,221	1,148	1,196		110		982
(c) Complete diphtheria toxin-antitoxin inoculations		372		1,280		1,684			429	
(d) Persons treated with antitoxin for immediate protection against diphtheria	15	1	20		1				226	17
13. Child hygiene.										
(a) Prenatal—										
(1) Cases given advice	51	12	227	111	95	13	12	11	166	170
(2) Examinations	9	11			41				1	10
(3) Office consultations	12	12	2	7	18	45	9	9	8	11
(4) Group conferences						22		15	2	
(5) Home visits	74	26	88	111	98	29	10	67	157	253
(6) Midwives instructed		8			114	74		24	2	132
(b) Infant and preschool—										
(1) Babies and children examined	313	144	819	170	969	1,066	8	16	410	167
(2) Office consultations, mothers	7	27	32		73	2	2	12	491	111
(3) Group conferences with mothers	19	16	4		1	14		26	30	
(4) Home visits	209	242	188	408	641	119		153	199	426
(c) School—										
(1) Children examined	3,654	1,408	3,282	5,050	3,023	3,770	362	2,585	4,147	1,726
(2) Found defective	3,055	905	2,391	3,618	2,069	2,739	352	1,514	3,706	1,341
(3) Defects found	1,505	1,190	3,267	5,626	3,900	4,288	770	2,207	8,927	2,766
(4) Consultations, parents (office and school)	15	67	145	94	470		28	25	623	96
(5) Home visits	373	181	173	599	826	184	21	31	522	726

(6) Talks to classes or drills in hygiene	182	83	51	321	15		15	15	265	23
(7) Exclusions for communicable disease	112	144	102	28	65	99	28	3	106	71
(d) Nutritional classes—cases attending	228	193			60				, 018	6
14. Antimalaria work	(4)	(2)	(3)	(3)	(4)	(4)	(1)	(1)	(1)	(4)
15. Laboratory examinations										
(a) Positive	1,914	100	30	193	155	59		60	262	86
(b) Negative	3,323	102	50	204	193	467	5	107	912	270
Total	5,237	202	80	397	348	526	5	167	1,104	356
C RESULTS										
1. Sanitary privies installed.										
(a) Septic or L R S		5	4	15	12				3	
(b) Water-tight vault				5						
(c) Bucket and box		25		16					2	
(d) Pit		77	13	545	500	1,627		678	19	13
Total		107	17	581	512	1,627		678	24	13
2 Privies restored to sanitary type	1	2	6	117	977	416		155	12	60
3 Septic tanks installed	1	60	3		142	10		18	25	5
4. New sewer connections		5	41	6	6	242		31	256	239
5 New water connections	280	15	2	8	186	79		36	758	
6. Wells or springs improved		20	1		1			22	36	6
7. Public milk supplies radically improved		10			12			3	4	12
8 Treatments induced for correction of physical defects										
(a) In infants		2	18						37	
(b) In preschool children	6	8	31		42				21	16
(c) In school children	388	20	103	398	862	471		24	345	71
(d) In adults	13	6	1		2				10	20
9. Nutritional cases improved	125	213	1		15				59	13
10 Convictions for violation of sanitary laws			1		29	54		1	6	2
11 Nuisances corrected		279	36	420	1	144		99	203	27

[2] Considerable. [3] None [4] Little

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Jefferson, Kans	Lafourche Parish, La	Lauderdale, Ala	Laurens, Ga	Lawrence, Ala	Lewis and Clark, Mont	Limestone, Ala	Logan, W. Va	Lyon, Kans	Madison, Ala
Period of work in fiscal year 1926	Aug. 11, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926
A. EXPENDITURES										
Rural sanitation fund (P. H. S.)	$2,200 00	$600 00	$1,074 93	$400 00	$1,101 12	$2,400 00	$300 00	$377 00	$1,200 00	$300 00
State		1,200 00	2,100 52		1,249 98	206 25	2,499 96	600 00		2,499 96
County	6,867 38	1,800 00	4,610 12	3,800 00	4,640 15	2,071 24	1,691 19	11,931 82	4,170 61	7,999 92
Municipalities			1,368 39			2,071 21				4,298 90
Other agencies			5,510 70		1,125 00	694 75	1,620 00	1,600 00	1,650 00	4,054 97
Total	9,067 38	3,600 00	14,694 66	4,200 00	8,116 25	7,412 48	9,111 15	14,508 82	7,020 61	19,153 75
B. ACTIVITIES										
1. Educational										
(a) Lectures	13	73	99	97	50	7	168	148	41	101
(b) Attendance	878	7,498	6,695	3,460	2,102	2,421	8,749	1,866	2,107	12,011
(c) Bulletins distributed	3,940		6,265	1,480	2,295	3,875	3,618	5,832	5,812	1,818
(d) Newspaper articles	206		51	164	72	100	52	92	62	96
(e) Circular letters	583	384	4,104	670	166	445	2,968	1,043	3,092	2,455
(f) Health exhibits	1		1	1	1		8	6	1	1
2. Sanitary inspections										
(a) Private premises	17		1,440	258	571	62	168	2,257	56	4,103
(b) Public premises—schools, churches, stores, camps, etc.	213	163	279	178	284	168	938	500	170	112
3. Special inspections										
(a) Dairies		1	69	82		86	4	68	101	203
(b) Other food-producing or food-handling places	1	11	341	114	276	418	493	420	166	829
4. Examinations										
(a) For life extension advice		54	162	12	30	84	70			74
(b) For marriage licenses		3	8	1	1		80			254
(c) For work certificates (children)			50		2		11	2		446
(d) For lunacy	5		12	4	1		22	6	10	14
(e) Of prisoners	15		60	51	4	5	33	157	54	267
(f) Of food handlers	4	6	16	116		41	23	28	62	63
5. Acute communicable disease control										
(a) Visits to cases, carriers, contacts, or suspects	86	307	303	156	270	544	258	483	812	395
(b) Cases or carriers quarantined	245	96	110	48	47	112	126	235	434	102

6 Venereal disease control										
(a) Suspects examined	9	2	78	77	66	21	256	686	29	401
(b) Prophylactic treatments				49		17		2	3	
(c) Curative treatments	7		2	6	93		517	2,206	10	5,915
7. Tuberculosis control										
(a) Number examined	90		52	39	31	52	17	24	117	61
(b) Positive	10		15	13	10	16	12	9	42	22
(c) Negative	80		37	26	21	36	35	18	75	39
(d) Placed in institutions			1	8		3		7	3	
(e) Home visits	27		258	27	115	58	142	114	177	295
8 Persons treated for removal of hookworm				201	2		1			
9 Persons treated for prevention or cure of goiter	1					336			17	
10 Schick tests		2,284							4	
11 Cows tuberculin tested	186		1,148	15		2,032		297	191	1,945
12 Immunization										
(a) Complete antityphoid inoculations	12	1,620	5,620	3,246	3,005	31	1,563	1	358	1,550
(b) Antismallpox vaccinations		3,399	4,180	241	208	76	167	585	12	1,039
(c) Complete diphtheria toxin-antitoxin inoculations		1,181	13	760		739	7	49	1,183	
(d) Persons treated with antitoxin for immediate protection against diphtheria			8	103	2	33	3	61	79	77
13 Child hygiene										
(a) Prenatal—										
(1) Cases given advice	13		257	97	64	76	41	21	33	201
(2) Examinations			3	96	2	32	17		9	7
(3) Office consultations	6	14	2	81		47	13		23	21
(4) Group conferences			9	25		32	5			1
(5) Home visits	36	1	331	37	88	50	70	51	35	[1] 265
(6) Midwives instructed			64	65	2		39			67
(b) Infant and preschool—										
(1) Babies and children examined	36	35	171	90	11	404	324	683	164	338
(2) Office consultations, mothers	8		33	55		264	93	51	114	118
(3) Group conferences with mothers	1		18	23		60	18	35	2	14
(4) Home visits			375	31	205	161	116	588	108	939
(c) School—										
(1) Children examined	3,260	1,925	4,801	848	2,468	3,005	1,181	1,217	1,105	[illegible],006
(2) Found defective	2,668	1,611	2,109	531	1,930	2,537	2,868	3,670	1,217	3,272
(3) Defects found	5,001	3,610	2,711	603	2,782	6,269	1,241	1,995	1,873	5,098
(4) Consultations, parents (office and school)	255	25	208	105	48	173	96	37	81	152
(5) Home visits	670	11	587	84	500	872	166	934	123	168
(6) Talks to classes or drills in hygiene	314		29	59	26	71	2	220	93	55
(7) Exclusions for communicable disease	41		138	81	4	180	87	561	198	37
(d) Nutritional classes—cases attending			103	160						
14 Antimalaria work	(4)	(4)	(2)	(2)	(2)	(1)	( )	(1)	(1)	(2)
15 Laboratory examinations										
(a) Positive	7	69	231	404	176	362	214	472	225	708
(b) Negative	5	14	1,346	734	332	848	720	508	519	2,191
Total	12	83	1,577	1,138	508	1,210	934	980	744	2,899

[2] Considerable [3] None [4] Little

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Jefferson, Kans.	Lafourche Parish, La.	Lauderdale, Ala.	Laurens, Ga.	Lawrence, Ala.	Lewis and Clark, Mont.	Limestone, Ala.	Logan, W. Va.	Lyon, Kans.	Madison, Ala.
Period of work in fiscal year 1926	August 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926
C. RESULTS										
1. Sanitary privies installed										
(a) Septic or L. R. S.		14				5		179	97	4
(b) Water-tight vault						11			6	
(c) Bucket and box							2			100
(d) Pit	22	0	249	66	155	8	124	82	16	90
Total	22	20	249	66	155	21	126	261	119	194
2. Privies restored to sanitary type	102	2	40	110	13	20	37	121	10	417
3. Septic tanks installed		2	47		5	7	2	15	18	5
4. New sewer connections			108	80		41	19	119	84	115
5. New water connections			160	78	6	40	20	120	82	108
6. Wells or springs improved	15		16	40	3	8	38	11		116
7. Public milk supplies radically improved	7		1	28		51		10	17	3
8. Treatments induced for correction of physical defects										
(a) In infants			24	86		2	5			1
(b) In preschool children			60	74	7	42	1	3	1	5
(c) In school children	600	5	814	420	73	111	540	275	576	225
(d) In adults			17	76		6	10	1		3
9. Nutritional cases improved			84	160	5		2	189	55	
10. Convictions for violation of sanitary laws	7		15			6	18	1	1	5
11. Nuisances corrected	118	35	260	114	55	75	69	282	64	220

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Marion, Mo	Marion, W Va	Marshall, W Va	Mason, Ky	McKinley, N Mex	McPherson, Kans	Miller, Ga	Morgan, Tenn	Nansemond, Va	New Madrid, Mo
Period of work in fiscal year 1926	Feb. 1, 1926, to June 30, 1926	Oct 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to Jan 31, 1926	Nov 16, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926
A EXPENDITURES										
Rural sanitation fund (P H S)	$1,333 33	$225 00	$1,658 29	$1,025 00	$300 00	$2,109 60	$545 84	$688 [illegible]	$287 50	$600 00
State	258 33	1,250 00	1,950 00	2,111 02	2,550 00	1,200 00	583 33	337 11	3,043 95	1,774 41
County	1,187 29	8,449 81	8,056 76	3,066 19	1,307 07	3,527 88	1,111 09	589 61	6,087 88	3,504 41
Municipalities	1,568 92			800 00					3,013 91	
Other agencies	909 75		2,224 92	935 57					3,013 91	329 41
Total	5,257 62	9,924 81	13,889 97	7,967 78	7,15[illegible] 07	7,127 88	2,270 26	1,615 00	15,507 21	6,208 23
B ACTIVITIES										
1 Educational										
(a) Lectures	35	56	98	332	202	9	1	51	73	94
(b) Attendance	1,409	3,098	4,196	11,126	4,975	625	230	3,350	4,720	4,347
(c) Bulletins distributed	1,842	5,530	12,629	5,042	5,857	347	265	2,970	5,508	1,250
(d) Newspaper articles	37	42	91	229	63	38	25	9	183	151
(e) Circular letters	612		4,057	352	158				2,265	4,000
(f) Health exhibits		9	5	53	37				2	25
2 Sanitary inspections										
(a) Private premises	160	225	528	1,221	2,628	3	222	1,568	1,111	35
(b) Public premises—schools, churches, stores, camps, etc	85		125	600	825	128	18	55	27	90
3 Special inspections										
(a) Dairies	92	96	139	181	913	2			157	5
(b) Other food-producing or food-handling places	122		89	1,494	120	112			863	1
4 Examinations										
(a) For life-extension advice	1		3		94					245
(b) For marriage licenses										
(c) For work certificates (children)		3	8	10	2				98	1
(d) For lunacy			2	4	7	1				32
(e) Of prisoners	7		112	30	47	2				300
(f) Of food handlers			4		28				19	
5 Acute communicable disease control										
(a) Visits to cases, carriers, contacts, or suspects	1,143	291	3,836	652	787	204	25		238	285
(b) Cases or carriers quarantined	427	204	1,796	204	280	368	11		166	80

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Marion, Mo	Marion, W Va	Marshall, W Va	Mason, Ky	McKinley, N. Mex	McPherson, Kans	Miller, Ga	Morgan, Tenn	Nansemond Va	New Madrid, Mo
Period of work in fiscal year 1926	Feb. 1, 1926, to June 30 1926	Oct 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to Jan 31, 1926	Nov 16, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926
B ACTIVITIES—continued										
6. Venereal-disease control										
(a) Suspects examined	15		84	326	57	2			10	75
(b) Prophylactic treatments					4					
(c) Curative treatments	34		303	1,247	11					225
7 Tuberculosis control										
(a) Number examined	7	16	147	115	65	51			253	35
(b) Positive	1	3	66	27	59	10			76	25
(c) Negative	4	15	81	88	6	11			177	10
(d) Placed in institutions			51	4	4	1			26	10
(e) Home visits	15		161	307	68	2			437	27
8 Persons treated for removal of hookworm							84			
9 Persons treated for prevention or cure of goiter	1	76	453	137	10					2
10 Schick tests				75					562	
11 Cows tuberculin tested			12,615	444	11				201	10
12 Immunization										
(a) Complete antityphoid inoculations		300	204	298	18	7	123		1,138	210
(b) Antismallpox vaccinations		1,442	780	3,777	908	2	27		1,021	50
(c) Complete diphtheria toxin-antitoxin inoculations		5	1,961	72	19	7	254		507	
(d) Persons treated with antitoxin for immediate protection against diphtheria	2		49	48	4	25	10			12
13 Child hygiene										
(a) Prenatal										
(1) Cases given advice	11		48	227	176	1			11	35
(2) Examinations			1	194	45					
(3) Office consultation			1	311	36					5
(4) Group conferences				25	24					
(5) Home visits	7		5	622	221	1			41	15
(6) Midwives instructed				59	32				16	20
(b) Infant and preschool										
(1) Babies and children examined	500	63	11	1,993	1,179	89			435	250
(2) Office consultations, mothers	386		5	297	123	89			10	125
(3) Group conferences with mothers	10			55	27	16				
(4) Home visits	104	119	2	1,907	724				505	100

(c) School—										
(1) Children examined	1,230	5,130	1,257	3,098	6,167	4,098	280		5,169	2,300
(2) Found defective	576	4,932	931	1,818	4,633	2,665	138		2,567	940
(3) Defects found	814	11,552	1,587	2,865	7,565	5,072	176		3,779	1,780
(4) Consultations, parents (office and school)	529			1,018	322	1	400		61	300
(5) Home visits	136	214		706	711		99		706	80
(6) Talks to classes or drills in hygiene	92		64	486	222		22		32	32
(7) Exclusions for communicable disease	20	117	418	262	154				189	110
(d) Nutritional classes cases attending			30	240	1,875					87
14 Antimalaria work	(4)	(3)	(4)	(2)	(4)	(3)	(3)	(2)	(2)	(2)
15 Laboratory examinations										
(a) Positive	154	31	178	295	75	11	11		116	35
(b) Negative	348	23	312	405	146	40	23		351	19
Total	502	54	490	700	221	51	34		467	54
C RESULTS										
1 Sanitary privies installed:										
(a) Septic or L R S				22					3	
(b) Water-tight vault				6		3		31		
(c) Bucket and box								1	3	
(d) Pit	14	16	50	8	300	17	12	153	82	26
Total	14	16	50	36	300	20	12	185	88	26
2 Privies restored to sanitary type	18		30	33	220			2	185	
3 Septic tanks installed				25	11		9		6	
4. New sewer connections			34	126	52	2	3		372	1
5 New water connections	127			148	61	1	9		2	
6 Wells or springs, improved			4	57	26	22	6	6	13	
7 Public milk supplies radically improved	5			74	12	3			11	
8. Treatments induced for correction of physical defects										
(a) Infants	18		1	113	177					165
(b) In preschool children	34		23	280	167				3	110
(c) In school children	123	289	487	918	360	1,090	2		966	275
(d) In adults	1			149	145					300
9. Nutritional cases improved			30	153	1,256					51
10. Convictions for violation of sanitary laws	3		3	1					61	
11. Nuisances corrected	104	50	67	369	613	3	6	1	468	2

[2] Considerable [3] None [4] Little.

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Nodaway, Mo	Obion, Tenn	Oklahoma, Okla	Okmulgee, Okla	Ottawa, Okla	Ottawa, Kans	Pemiscot, Mo	Pettis, Mo	Polk, Mo	Preston, W Va
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Sept 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Mar 1, 1926, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to Jan 31, 1926	July 1, 1925, to June 30, 1926
A EXPENDITURES										
Rural sanitation fund (P H S)	$600 00	$299 17	$2,499 96	$2,499 56	$2,187 50	$1,200 00	$630 00	$600 00	$200 00	$1,200 00
State	1 800 00	2,958 11	2,350 15	1,432 98	2 923 96			2 475 00	1 100 00	4,302 60
County	7,935 43	5,046 00	1 852 10	4,920 98	4,503,24	5,499 79	1,130 65	3,000 00	1,525 00	8,213 08
Municipalities				850 00						
Other agencies		1,108 12	1,994 80	300 00			690 00	1,976 62	450 00	1,500 00
Total	10,335 43	11 411 40	8,697 01	10,003 52	9,614 70	6,699 79	2,430 65	8,051 62	3,175 00	15 135 68
B ACTIVITIES										
1 Educational										
(a) Lectures	178	338	40	46	41	18	11	82	41	302
(b) Attendance	4,293	13,495	5,657	2,047	5,962	1,110	1 500	3 330	1 480	16 194
(c) Bulletins distributed	5,204	6,137	5,005	4,548	6,771	9,796	2,094	1,175	1,090	8,473
(d) Newspaper articles	13	48*	3	41	27	58	17	89	30	23
(e) Circular letters		279	299	866	3,611	2,445	135	1,750	200	2 644
(f) Health exhibits		5	21		2	37	1	7	1	11
2 Sanitary inspections										
(a) Private premises	266	2,552	272	702*	4,022	34	24	13	12	2,195
(b) Public premises—schools, churches, stores, camps, etc	264	122	126	1 405	795	159	27	105	13	347
3 Special inspections										
(a) Dairies		37	29	243	6	19	1			36
(b) Other food-producing or food-handling places		651	481	702	33	57			1	232
4 Examination—										
(a) For life extension advice	26	83		1		194	57	138	87	91
(b) For marriage licenses										
(c) For work certificates (children)		15		6						
(d) For lunacy		15		6	19	2	4	7	2	11
(e) Of prisoners		47		8	83	15	86	8	9	14
(f) Of food handlers				90	1					76
5 Acute communicable disease control										
(a) Visits to cases, carriers, contacts, or suspects	254	151	94	233	179	270	8	190	87	232
(b) Cases or carriers, quarantined	142	139	54	172	186	219	7	136	30	215
6 Venereal disease control										
(a) Suspects examined		26	3	157	125	15	18	152	9	36
(b) Prophylactic treatments								9	1	
(c) Curative treatments		80	605	18	469	128	13	1,012	19	109

7 Tuberculosis control										
(a) Number examined		21	4	63	33	13	9	39	30	44
(b) Positive		9	2	47	25	3	6	9	5	2
(c) Negative		12	2	16	8	10	3	30	25	42
(d) Placed in institutions		1	2	16	1	2	3	1	4	1
(e) Home visits	1	71	41	124		8	8	90	19	46
8 Persons treated for removal of hookworm										
9 Persons treated for prevention or cure of goiter	63			1		1	2	1	7	375
10 Schick tests		388				91				
11 Cows tuberculin tested		355		315						831
12 Immunization										
(a) Complete antityphoid inoculations	1	3,367	2,236	2,942	591	66		10	80	1,257
(b) Antismallpox vaccinations	77	698	734		539	1,174	120	29	16	1,307
(c) Complete diphtheria toxin-antitoxin inoculations		164	3		5	848			60	606
(d) Persons treated with antitoxin for immediate protection against diphtheria		19		6	36		1	1	7	10
13. Child hygiene										
(a) Prenatal—										
(1) Cases given advice	8	47	4	91	3	20	59	58	5	279
(2) Examinations		8		7		13	2	6	2	2
(3) Office consultations		6		19		24	4	5	4	9
(4) Group conferences						2				118
(5) Home visits	5	119	5	120		1	3	53	1	207
(6) Midwives instructed		20		16						4
(b) Infant and preschool—										
(1) Babies and children examined	248	143		221	39	230	76	514	187	1,353
(2) Office consultations, mothers	206	12		41	22	155	10	94	77	46
(3) Group conferences with mothers	72	6		22		13		41	8	120
(4) Home visits	69	836	5	220	4	17	3	112	38	572
(c) School—										
(1) Children examined	2,974	4,660	4,447	2,730	6,443	1,855	1,793	2,134	617	6,048
(2) Found defective	2,497	2,303	2,579	1,703	2,885	1,582	1,526	1,024	248	5,061
(3) Defects found	5,406	4,200	3,480	2,942	9,556	3,286	2,645	1,363	334	6,031
(4) Consultations, parents (office and school)	159	85	16	68	1	39	38	79	78	171
(5) Home visits	179	541	112	254	2	42	6	162	86	322
(6) Talks to classes or drills in hygiene	114	75	141	7	3	18	55	94	9	387
(7) Exclusions for communicable disease	6	193	19	41	72	142	5	109	77	31
(d) Nutritional classes—cases attending								1,464		
14 Antimalaria work	(2)	(2)	(4)	(4)	( )	(3)	(4)	(3)	(3)	(3)
15 Laboratory examinations										
(a) Positive	29	76	30	126	89	10	25	165	19	108
(b) Negative	24	228	167	153	146	364	33	225	10	214
Total	53	304	197	279	235	401	58	390	59	322

[2] Considerable. [3] None [4] Little

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Nodaway, Mo	Obion, Tenn	Oklahoma, Okla	Okmulgee, Okla.	Ottawa, Okla	Ottawa, Kans	Pemiscot, Mo	Pettis, Mo	Polk, Mo	Preston, W Va
Period of work in fiscal year 1926	July 1 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Sept 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Mar 1, 1926, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to Jan 31, 1926	July 1, 1925, to June 30, 1926
C RESULTS										
1 Sanitary privies installed										
(a) Septic or L R S		3						1		9
(b) Water tight vault					2	4				9
(c) Bucket and box		1		4	389					92
(d) Pit		84	16	1	17		4	21		796
Total		88	16	5	408	4	4	22		906
2 Privies restored to sanitary type	29	162	47	85	53	4		5	8	
3 Septic tanks installed		3			1					19
4 New sewer connections	131	133		41	59					160
5 New water connections	110	98		12	2				2	213
6 Wells or springs improved	7	11	14	35	1		1	16	12	102
7 Public milk supplies radically improved		9		14	1	4				4
8 Treatments induced for correction of physical defects										
(a) In infants							3	74	1	17
(b) In preschool children		1		10	2		2	40	17	414
(c) In school children	111	158	210	265	47	1	8	661	27	434
(d) In adults	11			4				65	7	23
9. Nutritional cases improved								50	0	236
10 Convictions for violation of sanitary laws				9						3
11. Nuisances corrected		524	33	148	88	28		1	0	251

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Pulaski, Ark	Rhea, Tenn	Roane, W Va	St Francois Mo	St Louis, Mo	San Diego, Calif	San Joaquin district, Calif	Santa Barbara, Calif	Santa Fe, N Mex	Talladega, Ala
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	Oct 26, 1925, to June 30, 1926	Sept 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Mar 1 1926, to June 30 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926
A EXPENDITURES										
Rural sanitation fund (P H S)	$1 999 92	$669 12	$251 16	$600.00	$775 00	$2,499 96	$999 96	$2 499 96	$300 00	$1,200 00
State	600 00	370 23	2,162 73	2,878 49						3,339 96
County	8,984 19	571 91	4,325 35	3,115 94	3,291 25	31,493 42	90,408 89	6,519 96	1,028 01	5,958 34
Municipalities										1,775 32
Other agencies			2,162.62	9,415 04			1,800 00			985 69
Total	11,584 11	1,611 26	8,904 86	16,069 47	4,066 25	33,993 38	93,208 85	9,019 92	4,328 01	13,259 31
B ACTIVITIES										
1 Educational										
(a) Lectures	102	6	296	52	10	36	78	29	15	101
(b) Attendance	5,009	657	6,965	4 076	240	866	9,132	685	644	5,009
(c) Bulletins distributed	1,432	3,395	11 082	806	474	6 233	3,029	148	104	395
(d) Newspaper articles	32	5	44	90	28	44	327	18	54	42
(e) Circular letters	281		1,710	2 495	1 154	381	17,305	266	113	1,031
(f) Health exhibits	18		28	17		7	20			3
2 Sanitary inspections										
(a) Private premises	207	2,083	701	1 164	107	91	2,751	31	308	2,116
(b) Public premises—schools, churches, stores, camps, etc.	196	26	782	219	39	151	1,078	39	18	250
3 Special inspections										
(a) Dairies	162		39	4	5	901	7,068	6	18	57
(b) Other food-producing or food-handling places	6	86	119	1	1	1,513	7,103	8	10	848
4 Examinations										
(a) For life extension advice	25						4,671			15
(b) For marriage licenses									2	22
(c) For work certificates (children)	1		3		8		22		83	39
(d) For luna cy	1			2	4		5	6		4
(e) Of prisoners			2	1	180		93		9	33
(f) Of food handlers	1		11		1		156		3	97
5 Acute communicable-disease control										
(a) Visits to cases, carriers, contacts, or suspects	147		78	2,447	832	1 326	11,189	82	179	284
(b) Cases or carriers quarantined	37	8	61	1,010	750	219	186	2	220	12

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926 - Continued

Counties (or districts)	Pulaski, Ark.	Rhea, Tenn	Roane, W Va.	St Francois, Mo	St. Louis, Mo	San Diego, Calif	San Joaquin district, Calif	Santa Barbara, Calif	Santa Fe, N Mex	Talladega, Ala
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	Oct 26, 1925, to June 30, 1926	Sept 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Mar 1, 1926, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926
B ACTIVITIES continued										
6. Venereal-disease control										
(a) Suspects examined	9		9	62	13		811	2	21	734
(b) Prophylactic treatments				7					2	1
(c) Curative treatments			3	152	55		8,629	1	11	2,229
7. Tuberculosis control										
(a) Number examined	20		131	22	19	61	349	87		42
(b) Positive	7		30	11	11	5	179	21		20
(c) Negative	13		101	11	8	56	170	66		22
(d) Placed in institutions	3		7	6	5	5	33	8		
(e) Home visits	9		18	71	143	83	1,078	17		515
8. Persons treated for removal of hookworm	50									
9. Persons treated for prevention or cure of goiter							2	3	22	
10. Schick tests										67
11. Cows tuberculin tested	1,390					7,519	1,340			8
12. Immunization:										
(a) Complete antityphoid inoculations	689		463	762			928		49	1,079
(b) Antismallpox vaccinations	203	51	1,421	104		1,554	18,068	12	330	337
(c) Complete diphtheria toxin-antitoxin inoculations	201			1	3	1,018	1,784		374	1,131
(d) Persons treated with antitoxin for immediate protection against diphtheria	100		6		11	8	61		105	22
13. Child hygiene										
(a) Prenatal -										
(1) Cases given advice	9		3	77		44	325	7	21	60
(2) Examinations			11				290	1	2	44
(3) Office consultations	1		8	2		2	284		9	
(4) Group conferences						1				
(5) Home visits	2		3	78		52	203	3	12	108
(6) Midwives instructed							1		28	49
(b) Infant and preschool—										
(1) Babies and children examined	169		18	638	32	839	2,892	240	35	1,220
(2) Office consultations, mothers	28		1	430	3	289	1,462		26	46
(3) Group conferences, with mothers	54			14		222	34			108
(4) Homes visits	20		82	373		675	9,180	55	9	877

(c) School—										
(1) Children examined	700		4,423	4,914	438	7,134	11,040	1,649	2,542	3,199
(2) Found defective	566		2,655	5,350	402	3,104	5,031	703	422	2,384
(3) Defects found	859		5,106	6,734	1,104	2,874	8,641	859	478	3,483
(4) Consultations, parents (office and school)	194		143	305	42	129	1,129	258	51	193
(5) Home visits	77		230	424	32	1,282	13,901	1,175	25	314
(6) Talks to calsses or drills in hygiene			201	435	10	182	1,158	57	29	186
(7) Exclusions for communicable disease	56		32	430	39	129	1,176	56	258	8
(d) Nutritional classes—cases attending			2	485						
11 Antimalaria work	[4]	[2]	[3]	[3]	[3]	[3]	[3]	[4]	[3]	[2]
12 Laboratory examinations										
(a) Positive	113		60	104	34	121	1,133	1	53	350
(b) Negative	181		82	184	10	1,204	3,737	6	45	1,196
Total	294		142	288	44	1,325	4,870	7	98	1,546
C RESULTS										
1. Sanitary privies installed										
(a) Septic or L. R. S	8			1	2		3	2		1
(b) Water-tight vault		2								
(c) Bucket and box	11			6						54
(d) Pit	43	383	18	22	51		2	2	18	162
Total	62	385	18	29	53		5	4	18	217
2 Privies restored to sanitary type	9	200	21	280	19			2	50	154
3 Septic tanks installed	34	5	4	7	6	580			1	7
4 New sewer connections	1	47	11	75		55	668		3	150
5 New water connections	31		9	62		1,079	628		11	130
6 Wells or springs improved	35	21	27	10	3	2			3	10
7 Public milk supplies radically improved	21		9						20	2
8 Treatments induced for correction of physical defects										
(a) In infants	10			7		5	8		1	15
(b) In preschool children	125			17	1	42	14	5	4	23
(c) In school children	800		36	549	1	362	1,080	569	50	1,610
(d) In adults	1		12	8		11	600	10	2	5
9 Nutritional cases improved				100		308			1	
10 Convictions for violation of sanitary laws	2			2			3			5
11 Nuisances corrected	27	54	93	175	48	20	506	19	197	639

[2] Considerable, [3] None [4] Little

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926 —Continued

Counties (or districts)	Union, N Mex	Valencia, N Mex	Walker, Ala	Walker, Ga	Washington Parish, La	Washington, Miss	Weakley, Tenn	Wise, Va	10 Virginia counties	Total
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Dec 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	
A. EXPENDITURES										
Rural sanitation fund (P H S)	$599 97	$300 00	$900 00	$1,740 00	$2,099 16	$1,190 00	$175 00	$400 00	$4,411 50	$78,06[illegible] 57
State	259 16	500 00	1,330 00		2,000 16	930 7[illegible]	1,106 47		10,250 13	108,629 71
County	4,577 34	5,605 14	5,167 67	4,492 30	2,815 08	3,179 01	2,255 70	15,822 31	14,843 10	571,557 42
Municipalities					1,320 88	2,546 67				21,974 42
Other agencies	82 71	500 00	1,550 24				1,256 46			76,748 53
Total	5,519 18	6,905 14	8,947.91	6,232 30	8,235 28	8,146 44	4,793 72	16,122 31	29,505 23	856,062 38
B. ACTIVITIES										
1. Educational:										
(a) Lectures	58	36	59	129	164	265	97		113	7,418
(b) Attendance	1,430	939	3,927	5,297	11,712	6,947	1,704		41,908	462,627
(c) Bulletins distributed	1,855	986	1,729	5,192	15,852	2,318	1,813	1,870	11,012	448,204
(d) Newspaper articles	41	40	28	17	13	40	38	10	180	5,68[illegible]
(e) Circular letters	645	244	2,268	1,586	2,142	1,300	425	22	3,010	147,626
(f) Health exhibits	2	7	3		1			4	37	562
2. Sanitary inspections										
(a) Private premises	357	56	4,871	3,263	356	8,086	273	1,518	20,809	146,715
(b) Public premises—schools, churches, stores, camps, etc.	99	105	372	263	296	879	190	6	900	32,918
3. Special inspections										
(a) Dairies	7	4	147	113	329	12	26	68		14,360
(b) Other food-producing or food-handling places	51	16	178		511	312	183	162	1,975	41,249
4. Examinations										
(a) For life extension advice	7		56		91		2			7,656
(b) For marriage licenses			120		1					651
(c) For work certificates (children)			48	126		1				1,568
(d) For lunacy	10		42			5	3			447
(e) Of prisoners	24	11	60			10	1			2,723
(f) Of food handlers	22		96		215					3,267
5. Acute communicable disease control										
(a) Visits to cases, carriers, contacts, or suspects	735	317	176	131	180	103	82	104		60,997
(b) Cases or carriers, quarantined	97	14	168	44	97	70	26	72	892	22,140
6. Venereal disease control:										
(a) Suspects examined	17	6	65	22		79		137		6,748
(b) Prophylactic treatments			5	1						165
(c) Curative treatments	2	6	67	7		52		2,184		33,451

7 Tuberculosis control										
(a) Number examined	3	2	75	37	17	59	1	101	------	1,333
(b) Positive	------	2	25	1	7	52	1	37	------	1,534
(c) Negative	3	------	50	33	10	7	------	64	------	2,700
(d) Placed in institutions	------	------	------	------	1	3	1	10	------	414
(e) Home visits	2	29	138	17	11	118	10	75	------	9,443
8 Persons treated for removal of hookworm	------	------	131	------	135	------	------	70	------	2,322
9 Persons treated for prevention or cure of goiter	------	------	------	------	------	------	------	------	------	3,405
10, Schick tests	------	------	------	------	------	------	26	219	------	6,394
11 Cows tuberculin tested	1,404	------	541	181	1,248	630	229	426	199	46,945
12 Immunization										
(a) Complete antityphoid inoculations	422	13	4,403	1,648	2,794	2,544	4,152	241	2,195	80,912
(b) Antismallpox vaccinations	211	858	255	196	7,831	3,246	8	127	10,971	102,487
(c) Complete diphtheria toxin-antitoxin inoculations	------	34	------	119	2,024	307	------	12	917	26,247
(d) Persons treated with antitoxin for immediate protection against diphtheria	20	------	142	------	11	40	------	------	------	1,870
13 Child hygiene										
(a) Prenatal—										
(1) Cases given advice	125	44	82	8	80	56	15	52	------	5,685
(2) Examinations	2	1	4	------	------	------	2	20	------	1,037
(3) Office consultations	2	1	10	14	3	16	------	------	------	1,250
(4) Group conferences	12	------	42	------	5	------	------	5	------	574
(5) Home visits	17	48	113	15	98	14	22	82	------	6,546
(6) Midwives instructed	8	39	3	------	------	160	1	20	------	1,529
(b) Infant and preschool—										
(1) Babies and children examined	132	350	797	84	130	325	301	875	------	28,439
(2) Office consultations, mothers	31	61	86	62	151	175	2	------	------	6,910
(3) Group conferences with mothers	16	26	42	1	554	1	9	185	------	2,271
(4) Home visits	65	407	372	8	155	607	49	788	------	51,294
(c) School—										
(1) Children examined	805	1,202	2,558	3,595	438	3,042	3,390	11,740	------	235,021
(2) Found defective	632	276	1,212	1,015	480	1,617	2,110	7,576	------	148,318
(3) Defects found	895	429	1,741	2,320	782	2,337	3,897	13,350	------	251,508
(4) Consultations, parents (office and school)	132	100	27	51	658	123	24	------	------	17,814
(5) Home visits	31	127	28	610	216	413	148	1,111	------	41,868
(6) Talks to classes or drills in hygiene	28	263	8	------	65	63	12	101	------	7,781
(7) Exclusions for communicable disease	56	5	16	------	40	------	6	94	------	12,775
(d) Nutritional classes—cases attending	------	75	1,265	------	------	------	------	------	------	10,303
14 Antimalaria work	(2)	(3)	(2)	( )	(4)	(2)	(4)	(2)	( )	------
15 Laboratory examinations										
(a) Positive	60	5	341	25	115	118	17	404	------	14,102
(b) Negative	163	14	225	59	184	1,717	11	733	------	41,135
Total	224	19	567	84	299	1,835	28	1,137	------	55,237

[2] Considerable [3] None [4] Little

Compilation of data, by counties, on cooperative demonstration work in rural sanitation in the fiscal year 1926—Continued

Counties (or districts)	Union, N Mex	Valencia, N Mex	Walker, Ala	Walker, Ga	Washington Parish, La	Washington, Miss	Weakley, Tenn	Wise, Va	10 Virginia counties	Total
Period of work in fiscal year 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	Dec 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	July 1, 1925, to June 30, 1926	
C RESULTS										
1 Sanitary privies installed										
(a) Septic or L R S					1			57	0	765
(b) Water-tight vault						13			25	11[illegible]
(c) Bucket and box			87		4				19	1,018
(d) Pit	43	1	490	172	55	2,200	19	518	1,1[illegible]	13,700
Total	43	1	577	172	60	2,213	19	575	1,[illegible]16	15,[illegible]
2 Privies restored to sanitary type	117	7	813	183	10	2,511	3	101	2,241	11,962
3. Septic tanks installed		2	2	22	26		5	7	90	1,877
4 New sewer connections			30	35	43	78		104	323	5,036
5 New water connections			43	40	22			103	171	6,923
6. Wells or springs improved	33	2	18		10		5	17	174	1,[illegible]08
7. Public milk supplies radically improved	4		19		1			5		592
8 Treatments induced for correction of physical defects										
(a) In infants	12	3	44		1	[illegible]				1,005
(b) In preschool children	2	12	48		1	25				2,360
(c) In school children	148	35	67	198	566	1,611				63,111
(d) In adults		6	3		4			1,725		1,791
9 Nutritional cases improved		65	36		1	202		2		6,426
10 Convictions for violation of sanitary laws			9			107				484
11 Nuisances corrected	57	18	158	244	37	2,775	4	31	607	18,813

The Cape Cod Project

The cooperative rural health work begun in May, 1921, under the direction of a whole-time district health officer in a group of the 15 towns (townships) in Cape Cod, Mass.,[11] has continued. In the first year of the work the number of towns participating was 10 and their pooled appropriations for support of the project was $5,100. In the fiscal year 1926 the number of towns participating was 10 and their appropriations aggregated $5,540. The survival of this cooperative project for a period of six years, under the New England town system of government, wherein the appropriation for the health service has to be authorized for each year by each town at a town meeting under a practically unanimous consent agreement of the citizens, is significant. This plan, with its demonstrated success on Cape Cod, seems to have a considerable range of applicability in those States in which the town, township, or borough instead of the county, is the rural unit of local government with respect to public health administration.

The Massachusetts Legislature in its 1925 session adopted an act enabling the board of commissioners of Barnstable County to establish a county health department. The Barnstable County health department, under the direction of a whole-time county health officer, is to begin operating in January, 1927. Thereafter the health service for Cape Cod will be supported with appropriations from the county treasury instead of pooled appropriations from the town treasuries. Any town on the cape can continue to maintain a town board of health, but the jurisdiction of the county health department will comprise the whole cape. The advantages of having the county as the unit for the local health administration are obvious.

The Barnstable County health department will be the first county health department established in New England. The precedent is of historic interest and is expected to prove of far-reaching practical importance.

Sanitary Officer Projects in Virginia and Tennessee Counties

The plan of special demonstration work in rural sanitation inaugurated in Virginia in the fiscal year 1920 was carried out in 10 counties[12] in that State and in 2 counties[13] in Tennessee in the fiscal year 1926.

[11] Reprint No 699, from Public Health Reports of Oct 7, 1921, pp 11, 12, Reprint No 788, from Public Health Reports of Sept 29, 1922, p 14; Reprint No 857, from Public Health Reports of Dec 14, 1923, p 16, Reprint No 964, from Public Health Reports of Oct 17, 1924, p 18, and Reprint No 1047, from Public Health Reports of Oct. 23, 1925, p 27.

[12] Carroll, Charlotte, Chesterfield, Greensville, Henry, Prince Edward, Pulaski, Roanoke, Smyth, and Washington.

[13] Morgan and Rhea.

This plan, which is described in previous reports,[14] continues to prove highly successful It meets remarkably well the situations in rural counties in which effective health work, if done at all, must be done on a low-cost basis, and in which outdoor sanitary measures are especially needed The cost for such service in the average county is about $2,750 a year The county sanitary officer is engaged on a whole-time basis He does not have to be a graduate in medicine or engineering, but he must be a trained, practical sanitarian. Along with his sanitary work, he carries out, with the active cooperation of the local physicians, most of the other activities expected of a whole-time county health officer with a medical degree

The results accomplished in the county sanitary officer projects become more impressive from year to year Some of these counties are now among the foremost in the list of rural counties in the United States presenting high-grade demonstrations in sanitary progress

This county sanitary officer plan after seven years of testing appears to offer to the counties to which it is appropriate as large a return on the investment for county health service as any other yet tried or proposed.

Three-County Project in Georgia

The project in the southwestern part of Georgia inaugurated in the fiscal year 1924 and described in the report for that year [15] and discussed in the report for the fiscal year 1925 [16] was continued in the fiscal year 1926. In this project one whole-time health officer, a physician with training in health work, serves as health officer of each of three adjacent counties Under his direction there is on duty in each of the three counties an assistant health officer who is a layman with practical training in sanitary work, and in one of the counties (Decatur) there is on duty also a county health nurse

The special purpose of this cooperative project is to demonstrate an economical plan of public-health administration adapted to counties with resources too limited for each to support readily a complete, whole-time county health department. The plan seems right in general principle, but the detailed execution of it is, of course, attended with some practical difficulties The health officer serves under three separate county governments. The budget has been inadequate, and it has been difficult to persuade the county authorities to keep up their disproportionately small part (50 per cent) of it. The counties which have been comprised in the project are comparatively small in area, population, and economic resources. The local

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[14] Reprint No 615, from Public Health Reports of Oct 1, 1920, pp 10, 12, Reprint No 699, from Public Health Reports of Oct 7, 1921, pp 12, 14, Reprint No. 788, from Public Health Reports of Sept 29, 1922, pp 14-17, Reprint No 887, from Public Health Reports of Dec 14, 1923, pp 16-18, Reprint No 964, from Public Health Reports of Oct 17, 1924, pp 18-21, and Reprint No 1047, from Public Health Reports of Oct 23, 1925, pp 27, 28

[15] Reprint No 964, from Public Health Reports of Oct 17, 1924, p 22

[16] Reprint No 1047, from Public Health Reports of Oct 23, 1925, pp 28, 29.

prevalence of malaria, hookworm disease, typhoid fever, and dysentery is high. Such diseases are impoverishing. Quite heavy expenditures have been made in these counties in recent years for improved roads and public schools. Both improvements were needed, but not so much as health work.

The money spent for 1 mile of paved road would buy adequate health service for three of the counties for a year At some of the handsomest, recently constructed public schools unprotected water supplies and grossly insanitary open toilets have been found in use. In some of the schools examined 100 per cent of the children have been found infested with hookworm, and in others over 40 per cent of the children have been found to be suffering from chronic malaria With such conditions the efficiency of the public-school system is necessarily low, and it seems certain that by diverting to efficient public-health work some of the money appropriated for schools—even to the extent, if necessary, of causing all the public schools to be closed for one year in five—a net gain could be realized in the specifically educational results from the public-school system

The program at the beginning of this project, adopted with a special view to popularizing the health service, was to concentrate the work largely upon personal service measures, such as hookworm treatments, antityphoid vaccination, and quininization for the prevention or cure of malaria That program has proved of doubtful advisability. The evidence now is that if from the beginning more work had been done to improve environmental sanitation to prevent disease and less time had been spent on the "personal service measures," the beneficial results would be larger, more obvious, and more lasting than those accomplished, and the appreciation of the value of the health service by the local citizens would be greater than it is now. Anyhow, two of the three counties in the original project have droppped out—Seminole after the first year and Miller after the second year. Fortunately, two other counties, Baker and Grady, adjacent to Decatur, the remaining one of the original three, promptly took the respective places of Seminole and Miller. Thus, the three-county project has been continued with vicissitudes, but without interruption

Since the latter part of the fiscal year 1926 the sanitary features of the program have had a large part of the attention and effort of the members of the health department force.

If this project survives and proves successful, as now seems definitely possible, the demonstration will be of great value both locally and generally, and will thoroughly justify the support which the State health department and the Public Health Service have given and may give to the undertaking.

Special Features

Of the many especially interesting features of the work in the 89 projects during the fiscal year 1926 the following are mentioned mainly for the purpose of illustration:

In the group of nine Virginia counties in which county sanitary officers were engaged throughout the fiscal year there was only one case of typhoid fever reported for the month of June, 1926 The remarkable reduction of typhoid fever prevalence in these counties is definitely attributable to sanitary improvements.

In Santa Barbara County, Calif, a case of malignant smallpox developed in the fall of 1925 in a resident who had contracted the infection while on a visit to Los Angeles The case was discovered promptly and the patient was isolated in the county hospital where he died a few days later The county health officer and the county sheriff together traced all contacts, vaccinated them, and placed them in isolation. Not a secondary case developed

In San Joaquin County, Calif, an outbreak of smallpox with 16 cases and 2 deaths in April, 1926, was promptly controlled by vaccination and isolation Over 17,000 residents of the county were vaccinated within a period of 60 days after the beginning of the outbreak. The district health officer reports that 70 to 75 per cent of the population of the county are now immunized by vaccination against smallpox.

In Lyon and Ottawa Counties, Kans., over 50 per cent of the school children are reported to have had complete immunization (toxin-antitoxin) treatments against diphtheria

In Washington Parish, La., with a population of 24,164, the specific immunizations within the fiscal year 1926 were 7,831 against smallpox, 2,794 against typhoid fever, and 2,024 against diphtheria

In Jackson County, Mo., a case of extreme club feet was found in a girl in the course of the physical examination of school children. The feet were twisted nearly all the way around. Although walking was very painful to this girl, she walked five days in the week to and from school at a distance of a mile and a quarter from her home. Her age was 17. She was one of a family of 11 children Her father was a farm laborer obtaining wages of only $40 a month The county health department made arrangements whereby this girl was sent to a hospital in Kansas City and there operated upon for relief of the condition. Among the well-to-do citizens of Jackson County who perhaps complain at times about the few cents per capita a year paid in taxation for the support of the health department, there is in all probability not one who would not gladly contribute a dollar or more for the relief of one case such as this girl's.

In New Madrid County, Mo., a tonsil and adenoid clinic was attended by 20 local practicing physicians who gave the clinic their

thorough support and helped to make it a complete success. Eighty cases were operated upon one day

In Cascade County, Mont., the health officer found, on his examination of children in the public schools in the spring of 1926, that among those in the seventh and eighth grades 78 8 per cent of the tonsils found enlarged or diseased at previous examination had been removed, and 61 6 per cent of the decayed teeth found the year before had been repaired or extracted

In Rhea County, Tenn., a case of virulent smallpox was discovered in a man who had come from Florida while in the early stage of the disease. Fifty-one contacts were vaccinated immediately and no other case developed.

In Laurens County, Ga , the grand jury, at its sitting in May, 1926, paid the following tribute to the work of the county health officer, who has no assistant in his department:

> We, the grand jury of Laurens County, received the sixth annual report of the county health officer, and after examining same wish to inform the people of Laurens County what a service is being rendered by this department The people of Laurens County get more in direct return from the health department than any other public office, and we wish to mention three or four items of work done last year Take typhoid vaccinations—3,339 persons immunized against typhoid fever at a minimum of $3 a treatment would be $10,017, also in 1924 there were 17 deaths from typhoid and in 1925 only 7
>
> We had several cases of smallpox in 1925, in fact two cases were found in the court house, and one was found in the grand jury room This situation was handled without any loss of time in court or on farm There were 3,967 persons vaccinated
>
> The laboratory handled 963 specimens
>
> Thirty-three mad dog treatments were administered at a minimum of $40 for each treatment This would amount to $1,320.
>
> Public water supplies, milk, and other food establishments are regularly inspected, also the first year the health department was organized we had about 20 or 30 cases of colitis in Dublin. It has been reduced to a minimum, only 9 deaths in the county in 1925
>
> Nine hundred and eighteen births and 463 deaths registered in 1925. The birth and death records are a great asset to the county.
>
> We, the grand jury, are unable to express our appreciation for the valuable work rendered by Dr O. H. Cheek, and the county is very fortunate in having him at the head of the health department, as we consider him second to none in the State In fact, he has given the people splendid service and his records are found complete in every detail.
>
> Again, we, the grand jury of Laurens County, commend this department for the efficient work done and wish this report to be recorded in the minutes of the clerk of the superior court

In McKinley County, N. Mex., the health department was remarkably successful in its nutritional work among school children in the session of 1925–26. Milk, cocoa, and sugar to augment school luncheons were furnished by local welfare organizations and individual citizens. One thousand eight hundred and seventy-five pupils were admitted to nutritional classes. All showed a steady

underweight, and by the end of April only 65 of them remained handicapped to a sufficient degree to require further special attention.

In Roane County, W. Va., the health department has done some exceedingly good publicity work. Among the measures adopted in the educational campaign was the sending to every school child a Christmas letter which was as follows:

ROANE COUNTY HEALTH DEPARTMENT,
Spencer, W. Va., December 21, 1925

DEAR ——: We are addressing this letter to you, because this is such a busy time of the year for grown-ups, especially for teachers. We are asking you to show this to your teacher and read it to your schoolmates.

How much we would like to enjoy Christmas with you! This being impossible, we want you to know we are thinking of each of you and wishing you the merriest Christmas you have ever had. We are sure Dear Old Santa Claus will be as good to you as he possibly can. Isn't he the jolly fellow? How we like his smiling face! Sometimes we wonder just what kind of a star would be on his weight chart. He always looks so "Happy," he must surely be "Healthy," no doubt his "Habits" are very good. There they are again, the three "Capital H's" that we like to talk about.

We will soon be through visiting all the schools in Roane County, and will be glad of that, for we want to hurry back to see all the good things you are doing for yourself.

We feel that many of you are "Happily" forming good "Health Habits," such as brushing your teeth, washing your hands with soap at school before dinner, being careful to use individual drinking cups, individual soap or liquid soap, and individual or paper towels, keeping your school floors oiled, helping your teacher keep the flag up when the weather permits, also helping to keep proper ventilation, not forgetting the water on the stove.

Many underweights are trying to catch up with the "Good Weight" boys and girls by bringing milk to drink at school. That's another good habit. Are any of you doing this?

We would like to hear from you. How about those windows to your body? We hope they have been helped and repaired by glasses where needed. Have any one of you taken trips to the Dentist to Save, Save, Save those precious six-year molar teeth? The first four teeth of the second set that are never shed, the four soldiers that stand guard in your mouth to keep the nice, new, shining teeth in regular order when they come, while your baby teeth are shed. Have you looked at them yourself in the looking-glass? After you are six years of age, they come to stay in your mouth unless you let them decay. They are also the foremen of your food-grinding factory, from center front, on each side, upper and lower. The sixth teeth in line are your own little white soldier friends. Look at them often and see what they are doing. Let the dentist save them for you if they should decay.

If any of you have baby brothers or sisters at home, let us know your father's name and address, also the name and age of the baby, so we can send them our baby book.

We wish each of you a Merry, Merry Christmas and a very Happy New Year.

Yours for health,

F. C. MAKEPEACE, M. D.,
County Health Officer, Field Agent, U. S. P. H. S.
CHARLOTTE KUNZE, R. N.,
County Health Nurse.

General Progress in Rural Health Work

Progress in the development of whole-time rural (county) health service in the United States continued in the fiscal year 1926. According to data [17] collected by the rural sanitation office from the State health departments, the number of counties, or equivalent divisions, provided with local health service reaching all rural sections thereof, under the direction of whole-time county or district health officers, was 307 at the beginning of the calendar year 1926 as against 280 at the beginning of the calendar year 1925, 250 at the beginning of the calendar year 1924, 230 at the beginning of the calendar year 1923, 202 at the beginning of the calendar year 1922, 161 at the beginning of the calendar year 1921, and 109 at the beginning of the calendar year 1920 The gain of 198 within this six-year period, though much less than it might have been had means been provided for a larger degree of cooperation from the Federal and State official agencies, is significant

The prospects are good for a better rate of progress in this vitally important field in the next six years. Our public-health administrators generally now appear convinced that local official health service under the direction of a whole-time local health officer is the most essential element in the development of an adequate system of effective and economical public-health service in the United States, and that most of the work of the Federal and State health agencies should be conducted with and through such local health departments The principle of cooperative rural health work appears sound in theory and obviously is successful in practice State health departments in increasing number from year to year are obtaining authorization and appropriations to enable them more nearly to do their due and proportionate part in the development and maintenance of whole-time county health service.

With a view to obtaining some idea of the popular attitude toward the participation of the United States Public Health Service in cooperative rural health work, copies of the report for the fiscal year 1925 were sent to a number of persons in representative positions. Included in the number were Senators and Representatives in Congress, governors of States, presiding officers of State legislatures, State superintendents of schools, presidents of State medical societies, presidents of State bankers' associations, State presidents of national parent-teachers' associations, State presidents of the general federation of women's clubs, district governors of Rotary, Lions, and Kiwanis Internationals, secretaries of chambers of commerce, and presidents and secretaries of national farm organizations. The reports were transmitted with a circular letter requesting an expression of opinion as to whether this activity of the U. S. Public Health

[17] Reprint No 1079 from Public Health Reports of May 7, 1926.

Service should be continued on the present scale, expanded, contracted, or discontinued. Two hundred and seventeen replies were received. Among them there were only six expressing an attitude of definite opposition to or of serious doubt as to the advisability of participation by the Federal Government in such work. Sixty-four were cordial but noncommittal. One hundred and forty-seven expressed the opinion that the cooperation of the U. S. Public Health Service in rural (county) health work should be continued either on its present or an expanded scale, and of these over two-thirds were definitely favorable to expansion.

Summary

The 89 cooperative projects in the fiscal year ended June 30, 1926, yielded results exceeding in value manyfold the cost of the work. Among the activities and results presented in the tabular statement (pp. 2387 to 2410), to which especial consideration may be given, are the following.

1. Public lectures presenting the principles and details of sanitation to over 402,600 persons.

2. Over 179,400 sanitary inspections of premises, with explanation of findings to occupants or owners of the properties.

3. Physical examination of over 235,000 school children, of whom over 148,000 were found to have incapacitating physical defects, with notification to parents or guardians of defects found.

4. Exclusion from public schools of 12,775 children affected with communicable diseases—such as diphtheria, scarlet fever, measles, whooping cough, scabies, and pediculosis—or presenting evidence of being carriers of the contagions of such diseases. This was brought about through active cooperation of school-teachers with the county health departments, and it must have been a very considerable factor in preventing widespread infection.

5. Thirty-three thousand one hundred and fourteen recorded treatments effecting correction of incapacitating physical defects among school children. These were brought about by written notification of defects found to parents or guardians, follow-up visits to homes of the children, making available proper clinical facilities, and other activities of the county or district health departments.

6. Bringing about treatments for correction of serious physical defects in 1,005 infants and 2,360 preschool children.

7. Treatments to correct iodine deficiency in 3,495 persons in endemic goiter districts.

8. Sixty thousand nine hundred and ninety-seven visits to homes of cases of communicable disease to advise and show the afflicted households how to prevent spread of the infections.

9. Six thousand five hundred and forty-six visits by health nurses to prenatal cases to advise and assist expectant mothers in carrying out hygienic and physiological measures making for healthy mothers and healthy babies

10 Instruction of 1,529 midwives in cleanly and careful methods.

11 Twenty-eight thousand three hundred and forty-nine infants and children of preschool age examined and over 34,200 home visits by health nurses or health officers to demonstrate hygienic measures for the promotion of the health and the protection of the lives of infants

12. Eighty thousand nine hundred and twelve persons inoculated for protection against typhoid fever.

13. One hundred and two thousand four hundred and eighty-seven persons vaccinated against smallpox.

14 Twenty-six thousand two hundred and forty-seven children treated with toxin-antitoxin mixture for immunization against diphtheria.

15 Forty-six thousand nine hundred and forty-five cows tuberculin tested, with elimination of reactors from herds, to prevent communication of bovine tuberculosis to persons through the medium of milk.

16 Two thousand three hundred and twenty-two persons treated effectively for relief from hookworm disease and for the prevention of the spread of the infection

17 Marked reduction in the spread of malaria in hundreds of localities, with an aggregate population of several hundred thousand.

18. Thirty-three thousand four hundred and fifty-one treatments to rid persons of venereal disease infection and prevent the spread of the infection.

19. Special examination of 4,333 persons for tuberculosis, of whom 1,534 were found with an active tubercular process and were advised to place themselves in the care of their private physicians and to carry out hygienic measures. Four hundred and fourteen of the positive cases were sent to institutions maintained in whole or in part for the treatment of tuberculosis.

20. Twenty-two thousand one hundred and forty cases of dangerous communicable diseases quarantined to prevent the spread of infection in the local community, the State, and throughout the country

21. The installation of 15,439 sanitary privies and 1,877 septic tanks at dwellings where previously there had been either grossly insanitary privies or no toilets of any sort.

22. Eleven thousand nine hundred and sixty-two privies repaired so as again to be of sanitary type.

23. Five thousand nine hundred and thirty-six homes connected for the first time with sanitary sewers.

[illegible] Eight [illegible] two hundred and thirty-one homes provided [illegible] water supplies in place of [illegible] contaminated water supplies

27 [illegible] of [illegible] milk supplies (the milk from [illegible] extent through the [illegible] the spread, through [illegible] and milk products [illegible] typhoid fever, scarlet fever, diphtheria, tuberculosis, septic sore throat, and infant diarrhea

28 Seven thousand six hundred and fifty-six adult persons (most of them over 40 years of age) were examined and advised about measures to conserve their health and prolong their lives

Such activities and results indicate that the plan of the work is both comprehensive and effective Considered from both a public health and an economic standpoint, the total result of such work stands in importance to our national welfare second to none other obtainable from equivalent investment of public funds

AUTOMOBILE FATALITIES, JANUARY 3 TO SEPTEMBER 11, 1926

The Department of Commerce announces that according to health officials in 78 principal cities having an aggregate estimated population of 31,878,016, there were 4,162 deaths reported from automobile accidents during the 252 days from January 3 to September 11, 1926. This is an average of over 16 deaths each day and is equivalent to an annual death rate of 18.9 per 100,000 population. Some of the deaths were due to accidents which occurred outside the corporate limits of the cities. The department has been endeavoring to have the officials make separate reports of such deaths Usually most of the deaths result from accidents occurring within the city This is especially true as regards the largest cities. Only two of the 663 deaths in New York City, and only 6 of the 435 deaths in Chicago, were caused by accidents outside the city limits. In Washington, D C, there were 52 automobile fatalities due to accidents in the city, but in addition there were 14 deaths due to accidents that occurred in the adjoining States of Maryland and Virginia On the other hand, the cities of Albany, Camden, Grand Rapids, Kansas City, Kans, Paterson, and Trenton all had more fatalities from accidents outside the city limits than from accidents within the cities.

There was considerable variation in the number of deaths from month to month. Starting with 431 in the January period, the number fell off to a minimum of 347 in March, increased to 549 for the four weeks ending June 19, was lower for the next two periods, but increased to a maximum of 560 in the period ending September 11.

The larger cities naturally show the greatest numbers of fatalities. The following table ranks 33 of the cities in ascending order accord-

ing to the mortality rate per 100,000 estimated population, due to accidents that occurred within the city limits for the first 36 weeks of this year Probably this is the fairest way of ranking the cities as regards automobile fatalities Kansas City, Kans., with an estimated population of 117,[illegible] ranks first, with one fatality and a death rate of 1.2 Indianapolis ranks thirty-third, with 59 fatalities and a death rate of 23.3

Automobile fatalities due to accidents occurring in 33 cities, January 3–September 11, 1926

City	Annual rate per 100,000 estimated population	City	Annual rate per 100,000 estimated population
Kansas City, Kans	1.2	Nashville, Tenn	13.7
Grand Rapids, Mich	4.6	Syracuse, N Y	14.2
Trenton N J	7.6	Washington D C	14.3
Fall River, Mass	7.7	Camden, N J	15.5
Paterson, N J	8.1	New York City	16.2
Jersey City N J	9.1	Springfield Mass	17.0
Norfolk Va	10.0	New Haven Conn	17.5
Minneapolis Minn	10.0	Oakland Calif	17.8
El Paso Tex	10.6	Kansas City Mo	17.8
Richmond Va	10.7	San Francisco, Calif	17.9
Lynn Mass	11.1	St Louis Mo	19.5
Fort Worth, Tex	11.8	Chicago Ill	20.4
Albany N Y	12.2	Dallas, Tex	21.9
Denver, Colo	12.7	San Diego, Calif	22.4
Baltimore Md	12.7	Duluth, Minn	23.1
Boston, Mass	12.9	Indianapolis, Ind	23.3
Birmingham, Ala	13.0		

EPIDEMIC OF TYPHOID FEVER CAUSED BY A "CARRIER" FOOD HANDLER

An interesting report on an epidemic of typhoid fever in Eaton Rapids, Mich., occurring in the latter part of 1925 and attributed to a typhoid bacilli carrier, is presented by Dr. George H Ramsey and Dr. C. H. Benning in the American Journal of Public Health for October

The epidemic followed a church dinner served at Eaton Rapids on November 18, 1925 Of 250 dinner guests 35 were attacked with typical and severe typhoid fever. There were 6 deaths. After a thorough investigation the outbreak was attributed to the eating of squash prepared by a typhoid carrier, whose urine and feces were found positive for typhoid bacilli, but who gave a negative Widal reaction

The history of the carrier revealed that she had suffered an attack of typhoid fever in 1900, when she was 48 years of age. Four of the five other members of the family had the disease at the same time The fifth member had had typhoid about nine years before this family outbreak. A son's wife who came to live with her mother-in-law a few years later developed typhoid fever, this being

the only case found associated with the carrier. That there were not more known cases attributed to this source is held due to the fact that all members of the family had had typhoid and that the carrier had lived in isolated residence on a farm The dinner was the first of such occasions to which she had contributed since she had left the farm and moved into Eaton Rapids

The epidemiological and laboratory evidence seems to warrant the conclusion that the source of outbreak which occurred among persons partaking of the church dinner was the squash which was prepared by the typhoid carrier.

The investigators report a mean incubation period for the epidemic of 13 days.

COMMUNITY ACTIVITIES FOR ABATEMENT OF LOCAL MOSQUITO NUISANCE

The Public Health Service received, on August 10, 1926, a letter from a resident of a small city located in a hilly section about 75 miles from Washington, D. C., asking for information about measures to abate a local mosquito nuisance, which was described as very irksome. Literature on the subject of mosquito prevention was sent and the letter was referred to Senior Sanitary Engineer J. A. Le Prince, United States Public Health Service, for suggestions about practicable, detailed procedure under the local conditions. As Mr. Le Prince's reply presents, in a plain manner, suggestions which may be useful to health officers and others concerned with mosquito prevention in many other localities, it is printed below:

NATIONAL MALARIA COMMITTEE,
Jackson, Miss, August 31, 1926

DEAR SIR: Your letter of August 9 to the Public Health Service has been referred to me for suggestions about detailed procedure under your local conditions.

You ask the old question, "What can we do?" And the answer is, "You must definitely decide that the mosquito must go" Not only you but a majority of the citizens must so decide and insist on freedom from mosquitoes If you have not already done so, you could hold a meeting of influential citizens who are particularly attractive to pestiferous mosquitoes and decide what you are going to do about it There are usually three stages of progress at such a meeting.

First. When the reception committee is particularly annoying and equally interested in the puncturing process, we say anything from "Oh my," to "D——."

Second. We swear somebody ought to do something about it

Third. We swear we are going to do something about it ourselves—and right now.

If a sufficient number of your citizens who are sick of existing conditions can be brought into the third stage, then you win

You should know what kind or kinds of mosquitoes are annoying your community. Collect some and send them in a pill box to Dr L. O. Howard, division of entomology, Department of Agriculture, Washington, D. C.

If your mosquito is *Culex* (as it probably is in your locality), then it is coming from man-made water containers that catch and hold rain water. These may be auto tires, barrels, roof gutters, or anything else that will hold rain water. The most usual place of deposit is the back yard.

Waters containing house wastes or sewage, such as small streams or natural drainage valleys, also may serve as breeding places. Learn how to locate such places. Take a tin dipper with you and dip at the grassy edges of the water and you will find the wiggle tails if they are in any natural water courses. They gather in the edges of floatage, and the richer the contamination of the water the more numerous the larvæ. There may be only one principal natural source of this sort or there may be dozens within mosquito flight range of your homes.

It is not the mosquitoes' fault, it is our fault for creating ideal breeding places for mosquito production and then cussing them for being with us.

Some mosquitoes under certain conditions live several months and females of certain species hibernate in winter season. The average life of most mosquitoes, however, is about two weeks. This is determined by noting that within about two weeks after the breeding places are eliminated mosquitoes are difficult to find. If destruction of the assumed principal source brings no results, rest assured you have missed locating the water that is producing the mosquitoes that are pestering you.

Ordinarily the pestiferous species of *Culex* travel less than a half mile; but when a sewage-carrying stream becomes stagnant so as to breed many millions of *Culex* mosquitoes, they then range out as far as a mile from the place of origin. Sewage settling basins often produce a similar condition.

It is generally a good plan to look for sewage-contaminated water when an invasion of *Culex* occurs. Follow the natural drainage valleys.

There is no practicable economical way of catching a sufficient number of the existing mosquitoes to produce relief. Elimination at the source or sources of supply is the proper procedure.

Regarding the house-yard problem, if we make Saturday mosquito day and have the mother of the family send the school children out into the back yards at 9 a. m. sharp each Saturday to look for water containers and turn them all upside down, that will settle the house-yard problem.

In Chicago last summer an inspection of the homes showed 40 per cent of the families raising their own mosquito supply. At West Point, Miss., the fire siren blows at 9 a. m. each Saturday morning, not to wake up the mosquitoes, but to wake up the kiddies who have forgotten to inspect the back yard for water containers with their mosquito larvæ.

If a quart jam jar with mosquito larvæ in 3 inches of water and the top covered with mosquito netting is placed in the school where all children can see the larvæ change into pupæ and then into mosquitoes, the children will become interested.

Also, if the children make some mosquito posters, with three prizes from the chamber of commerce for the best funny ones, you can use them in the town store windows next spring when you open your campaign. The objective is to sell the "freedom from mosquitoes" idea to the chamber of commerce and make the members think it is their idea, and to have a mosquito inspector in every family.

Twelve boy scouts can be taught in 20 minutes how to find mosquito wiggle tails in water containers. They can then inspect 300 house yards in one afternoon and inform you of the percentage of households in your community which prefer raising mosquitoes to raising flowers. Your local paper might desire to spread this news item. The boy scouts could use a few bugles in place of the fire siren on Saturday mornings next year, and the local papers could explain what all the row is about.

The time to eliminate the 1927 mosquito crop is when school opens in September, 1926.

Waste oil from the garages, thinned with a little kerosene, used as a thin film on puddles in stream heads, and on other prolific sources of mosquitoes three or four times a month will stop mosquito production. Apply the film of oil only where larvæ are present.

You must expect plenty of adverse criticism when operations are started, but this criticism will die a natural death, and the knockers will then tell you "We did it"—after you have freedom from mosquitoes.

Sincerely yours, J. A. LePrince.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Water Purification for Small Cities. H. V. Pedersen, sanitary engineer, State Board of Health, Des Moines, Iowa. *Journal American Water Works Association*, vol. 15, No. 5, May, 1926, pp. 549–553. (Abstract by Sol Pincus.)

The reluctance of the small city to give consideration to the development of a surface water supply with purification, after the earlier shallow-well stage is outgrown, is presented in this paper. A predilection to ground water supplies is generally shown by the council of the small cities, due largely to the fear of the high cost of operation and expert attention required for the purification plant. The author presents cases where far more satisfactory supplies of greater sanitary safety and soft quality were obtained by using a surface source and filtration plant. In one example cited the total cost of filtration plant and chlorinator for a city of 1,500 population was $11,000.

The author holds that competent operators for the small water-purification plant can generally be readily developed locally if the city will only provide a fair salary.

History of a Typhoid Carrier. Anon. *Public Health News*, vol. 11, Nos. 5 and 6, April–May, 1926, pp. 143–144. (Abstract by W. W. White.)

The history of a man is given who was known to be a carrier of typhoid fever at Cranbury, N. J. Forty cases and three deaths in which milk was found to be the vector of infection were first reported in August, 1915. In March and April of the same year, 20 cases occurred among users of milk from the dairy where this man was employed.

In 1916 this typhoid carrier was found working on a farm near Princeton Junction, where an investigation was made regarding an outbreak of typhoid. His discovery led to his again losing his job. In 1917 an epidemic of 13 cases at Bordentown was caused by the same carrier, after which he disappeared until 1921. Unable to get work on account of his reputation, he was given a position with the New Jersey State Laboratory. He died February 22, 1926. His history showed that he had typhoid in 1884. The number of cases he caused before 1915 is unknown. Since that time he is known to have been the source of infection of 77 cases with 4 deaths.

Malaria in New England. M. J. Quinn. *Boston Medical and Surgical Journal,* vol 194, 1926, pp 244–247 (18 refs) (Abstract by J F C H.) From *Bulletin of Hygiene,* vol. 1, No 7, July, 1926, p 563

"A survey of malaria in New England from 1634 to the present day The disease is still endemic in southern New England and probably more common generally than available statistics indicate. It is probable that *Anopheles* can be found in this State at all levels below 2,000 feet "

Observations on the Emergence of Anopheles Mosquitoes. G. H. Bradley. *The American Journal of Tropical Medicine,* vol 6, No. 4, July, 1926, pp 283–298 (Abstract by L D Fricks)

The author here reports a series of observations conducted during the years 1921, 1922, and 1924, around Mound, La , on the rate of emergence of *Anopheles* per unit of area in selected breeding places, and also compares these rates with similar observations of *Anopheles* emergence as reported from other parts of the world.

Nets of known size were placed over the selected water surfaces and daily collections of adults found inside the nets were made. A total of 904 9 square yards of water surface was covered by nets, and 585 *Anopheles* were collected, giving an average daily emergence of 0 653 per square yard An increase in the number of larvae present in selected areas did not cause a proportionate increase in the rate of emergence. This may have resulted from scarcity of food or activity of larvae enemies Of the *Anopheles* which emerged, females were somewhat greater in numbers than males; 516 females to 461 males in the total catch

Examination for Entrance into the Regular Corps of the Public Health Service

Examinations of candidates for entrance into the Regular Corps of the United States Public Health Service will be held at the following-named places on the dates specified·

Washington, D C	Dec. 6, 1926.
Chicago, Ill	Dec 6, 1926.
New Orleans, La	Dec. 6, 1926.
San Francisco, Calif	Dec 6, 1926.

Candidates must be not less than 23 nor more than 32 years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily oral, written, and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate

Requests for information or permission to take this examination should be addressed to the Surgeon General, United States Public Health Service, Washington, D. C.

DEATHS DURING WEEK ENDED OCTOBER 9, 1926

Summary of information received by telegraph from industrial insurance companies for week ended October 9, 1926, and corresponding week of 1925. (From the Weekly Health Index, October 13, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Oct. 9, 1926	Corresponding week, 1925
Policies in force	38,196,497	61,295,734
Number of death claims	6,400	9,559
Death claims per 1,000 policies in force, annual rate	8.7	8.1

Deaths from all causes in certain large cities of the United States during the week ended October 9, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, October 13, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Oct. 9, 1926: Total deaths	Week ended Oct. 9, 1926: Death rate[1]	Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year: Week ended Oct. 9, 1926	Deaths under 1 year: Corresponding week 1925	Infant mortality rate, week ended Oct. 9, 1926[2]
Total (69 cities)	6,342	11.4	11.1	818	843	[3] 67
Akron	25			4	6	43
Albany[4]	33	14.5	11.2	5	1	104
Atlanta	59			11	3	
White	29			7		
Colored	30	(5)		4		
Baltimore[4]	185	11.9	11.3	24	24	73
White	135			17		64
Colored	50	(5)		7		112
Birmingham	48	11.0	11.9	10	6	
White	25			5		
Colored	23	(5)		5		
Boston	212	14.0	14.3	43	41	120
Bridgeport	41			8	3	136
Buffalo	131	12.6	13.2	18	26	57
Cambridge	29	16.7	9.6	4	3	71
Camden	35	16.9	16.1	6	4	101
Canton	13	6.2	10.8	4	7	88
Chicago[4]	607	10.4	9.2	59	78	52
Cincinnati	141	17.9	17.5	19	24	118
Cleveland	177	9.6	8.4	25	22	65
Columbus	72	13.2	13.0	17	7	159
Dallas	50	13.0	11.3	10	7	
White	37			9		
Colored	13	(5)		1		
Dayton	30	11.5	7.5	6	5	99
Denver	71	13.0	13.5	10	7	
Des Moines	[illegible]	10.4	10.0	1	4	17
Detroit	25[illegible]	10.3	11.1	37	42	60
Duluth	24	11.1	10.9	5	2	116
El Paso	27	12.9	12.9	3	6	
Erie	23			3	2	59
Fall River[4]	25	10.0	10.5	8	5	125
Flint	30	11.4	6.0	10	6	169
Fort Worth	25	8.2	7.9	4	3	
White	21			3		
Colored	4	(5)		1		
Grand Rapids	36	12.0	10.2	6	11	86
Houston	40			3	4	
White	23			2		
Colored	17	(5)		1		
Indianapolis	92	13.1	11.3	14	9	106
White	79			11		96
Colored	13	(5)		3		172
Jersey City	63	10.3	9.6	4	12	30
Kansas City, Kans	27	12.0	9.4	7	2	136
White	20			4		89
Colored	7	(5)		3		456
Kansas City, Mo	108	15.0	12.8	18	9	
Los Angeles	214			22	18	61

(Footnotes at end of table)

Deaths from all causes in certain large cities of the United States during the week ended October 9, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ending Oct. 9, 1926: Total deaths	Week ending Oct. 9, 1926: Death rate[1]	Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year: Week ended Oct. 9, 1926	Deaths under 1 year: Corresponding week, 1925	Infant mortality rate week ended Oct. 9, 1926[2]
Louisville	76	12.7	11.7	5	6	111
White	[illegible]			2		[illegible]
Colored	21			3		210
Lowell	2[illegible]			[illegible]	1	[illegible]
Lynn	22	[illegible]	[illegible]	3	2	73
Memphis	[illegible]	22.7	11.[illegible]	8	8	
White	[illegible]			6		
Colored	4[illegible]			2		
Milwaukee	[illegible]	[illegible]	10.[illegible]	6	1[illegible]	35
Minneapolis	105	12.6	[illegible]	11	11	61
Nashville[4]	[illegible]	14.5	12.[illegible]	3	4	
White	2[illegible]			3		
Colored	9	([5])		0		
New Bedford	[illegible]2			[illegible]	3	121
New Haven	[illegible]	11.2	13.1	4	5	55
New Orleans	128	15.9	[illegible]	11	25	
White	63			6		
Colored	[illegible]			5		
New York	1,1[illegible]	10.2	1[illegible].9	123	1[illegible]	50
Bronx Borough	121	7.0	7.7	12	9	40
Brooklyn Borough	[illegible]	9.3	9.4	[illegible]	32	40
Manhattan Borough	[illegible]	[illegible]	14.1	[illegible]	[illegible]	61
Queens Borough	[illegible]12	7.6	8.9	12	5	75
Richmond Borough	32	11.7	15.5	[illegible]	3	88
Newark, N. J.	103	11.7	9.9	20	15	96
Norfolk	22	6.6	9.2	3	3	61
White	9			1		33
Colored	13	([5])		2		106
Oakland	57	11.4	10.1	6	5	70
Oklahoma City	31			5	1	
Omaha	43	10.4	12.6	5	7	53
Paterson	25	9.1	14.0	1	2	17
Philadelphia	428	11.4	11.2	55	57	73
Pittsburgh	135	11.1	10.7	25	23	83
Portland, Oreg.	66			6	6	60
Providence	45	8.5	10.7	4	6	33
Richmond	45	12.4	12.9	5	13	62
White	24			2		39
Colored	21	([5])		3		104
Rochester	71	11.5	9.1	10	8	79
St. Louis	174	10.9	11.2	23	13	
St. Paul	53	11.1	11.2	2	5	18
Salt Lake City[4]	27	10.6	12.7	2	2	30
San Antonio	40	10.2	13.2	13	9	
San Diego	32	15.2	16.7	3	3	64
San Francisco	156	14.3	12.2	4	5	24
Schenectady	25	14.0	9.6	3	3	86
Seattle	67			4	4	39
Somerville	16	8.3	8.4	2	6	57
Spokane	32	15.3	13.4	3	3	70
Springfield, Mass.	28	10.1	11.4	3	5	46
Syracuse	44	12.5	10.6	4	5	51
Tacoma	15	7.1	15.0	1	6	24
Toledo	59	10.5	11.3	13	17	125
Trenton	36	14.0	14.6	5	5	85
Utica	19	9.6	13.9	6	2	137
Washington, D. C.	125	12.3	10.5	16	13	92
White	80			10		83
Colored	45	([5])		6		109
Waterbury	23			1	5	24
Wilmington, Del.	28	11.8	8.1	4	3	89
Worcester	60	16.2	11.2	5	4	60
Yonkers	22	9.9	9.6	5	3	113
Youngstown	31	9.8	9.1	5	6	63

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 64 cities.
[4] Deaths for week ended Friday, October 8, 1926.
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Kansas City, Kans., 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended October 16, 1926

ALABAMA

	Cases
Dengue	1
Diphtheria	79
Influenza	23
Malaria	141
Measles	17
Mumps	4
Ophthalmia neonatorum	1
Pellagra	4
Pneumonia	24
Poliomyelitis	3
Scarlet fever	31
Smallpox	4
Tetanus	5
Tuberculosis	170
Typhoid fever	95
Typhus fever	3
Whooping cough	51

ARIZONA

	Cases
Diphtheria	4
Measles	25
Mumps	6
Scarlet fever	14
Tuberculosis	16
Typhoid fever	5
Whooping cough	1

ARKANSAS

	Cases
Chicken pox	10
Diphtheria	8
Hookworm disease	1
Influenza	44
Malaria	124
Measles	2
Mumps	6
Pellagra	4
Poliomyelitis	2
Scarlet fever	6
Tuberculosis	13
Typhoid fever	46
Whooping cough	27

CALIFORNIA

	Cases
Cerebrospinal meningitis	
Fresno	1
Oakland	1
Chicken pox	108
Diphtheria	110
Influenza	15
Lethargic encephalitis	2
Measles	406
Poliomyelitis	
Berkeley	1
Burbank	1
Los Angeles County	1
Scarlet fever	145
Smallpox	16
Tuberculosis	115
Typhoid fever	18
Typhus fever	1
Whooping cough	52

COLORADO

	Cases
Chicken pox	6
Diphtheria	12
Hookworm disease	1
Measles	4
Paratyphoid fever	1
Pneumonia	3
Poliomyelitis	1
Scarlet fever	33
Tuberculosis	11
Typhoid fever	8
Whooping cough	3

CONNECTICUT

	Cases
Chicken pox	27
Diphtheria	33
German measles	2
Influenza	2
Malaria	1
Measles	10
Mumps	5
Pneumonia (broncho)	14

CONNECTICUT—continued

	Cases
Pneumonia (lobar)	22
Poliomyelitis	2
Scarlet fever	23
Septic sore throat	15
Trachoma	1
Tuberculosis (pulmonary)	22
Typhoid fever	4
Whooping cough	22

DELAWARE

Diphtheria	1
Scarlet fever	4
Tuberculosis	2
Typhoid fever	6

FLORIDA

Chicken pox	1
Diphtheria	3[illegible]
German measles	2
Influenza	3
Malaria	13
Mumps	3
Pneumonia	4
Scarlet fever	9
Smallpox	13
Tetanus	1
Tuberculosis	8
Typhoid fever	11
Vincent's angina	1
Whooping cough	12

GEORGIA

Chicken pox	4
Conjunctivitis (acute)	3
Diphtheria	86
Dysentery	6
Hookworm disease	10
Influenza	58
Malaria	128
Measles	4
Mumps	12
Pellagra	2
Pneumonia	16
Scarlet fever	22
Septic sore throat	26
Smallpox	1
Tuberculosis	7
Typhoid fever	49
Typhus fever	2
Whooping cough	10

IDAHO

Chicken pox	5
Diphtheria	5
Measles	4
Scarlet fever	16
Typhoid fever	3
Whooping cough	6

ILLINOIS

Cerebrospinal meningitis	
Cook County	1
Iroquois County	1
Winnebago County	1
Chicken pox	197
Diphtheria	110
Influenza	14

ILLINOIS—continued

	Cases
Lethargic encephalitis—Cook County	1
Measles	160
Mumps	22
Pneumonia	150
Poliomyelitis	
Cook County	3
Henry County	1
Macon County	1
Richland County	1
Scarlet fever	176
Smallpox	1
Tuberculosis	284
Typhoid fever	74
Whooping cough	156

INDIANA

Cerebrospinal meningitis	2
Chicken pox	[illegible]5
Diphtheria	129
Influenza	9
Measles	38
Mumps	1
Pneumonia	3
Poliomyelitis	3
Scarlet fever	86
Smallpox	14
Tuberculosis	29
Typhoid fever	49
Whooping cough	44

IOWA

Cerebrospinal meningitis	1
Chicken pox	21
Diphtheria	19
German measles	1
Measles	2
Mumps	1
Pneumonia	1
Scarlet fever	55
Smallpox	2
Tuberculosis	6
Typhoid fever	3
Whooping cough	8

KANSAS

Chicken pox	40
Diphtheria	27
German measles	2
Influenza	1
Lethargic encephalitis	2
Measles	56
Mumps	2
Pneumonia	12
Poliomyelitis	
Haven	1
Horton	1
Marysville	2
Wichita	1
Scarlet fever	[illegible]7
Smallpox	4
Tetanus	1
Tuberculosis	28
Typhoid fever	25
Whooping cough	33

LOUISIANA

	Cases
Diphtheria	24
Influenza	11
Lethargic encephalitis	1
Malaria	28
Pneumonia	22
Scarlet fever	15
Tuberculosis	42
Typhoid fever	16

MAINE

Chicken pox	18
Conjunctivitis	1
Diphtheria	6
Measles	32
Mumps	4
Pneumonia	3
Scarlet fever	31
Tuberculosis	7
Typhoid fever	6
Whooping cough	15

MARYLAND[1]

Chicken pox	27
Diphtheria	46
Dysentery	8
Impetigo contagiosa	1
Influenza	23
Malaria	1
Measles	4
Mumps	27
Paratyphoid fever	6
Pneumonia (broncho)	15
Pneumonia (lobar)	8
Poliomyelitis	1
Scarlet fever	52
Tetanus	1
Tuberculosis	38
Typhoid fever	59
Whooping cough	42

MASSACHUSETTS

Chicken pox	103
Conjunctivitis (suppurative)	3
Diphtheria	58
German measles	10
Influenza	5
Lethargic encephalitis	2
Measles	22
Mumps	61
Ophthalmia neonatorum	41
Pneumonia (lobar)	48
Poliomyelitis	3
Scarlet fever	130
Septic sore throat	1
Tuberculosis (pulmonary)	74
Tuberculosis (other forms)	15
Typhoid fever	19
Whooping cough	69

MICHIGAN

Diphtheria	216
Measles	34
Pneumonia	59
Scarlet fever	158
Smallpox	5
Tuberculosis	114
Typhoid fever	24
Whooping cough	89

[1] Week ended Friday.

MINNESOTA

	Cases
Chicken pox	59
Diphtheria	57
Influenza	3
Malaria	1
Measles	38
Pneumonia	2
Poliomyelitis	2
Scarlet fever	226
Smallpox	3
Trachoma	1
Tuberculosis	53
Typhoid fever	13
Whooping cough	28

MISSOURI

Cerebrospinal meningitis	1
Chicken pox	22
Diphtheria	66
Influenza	6
Malaria	2
Measles	37
Mumps	4
Ophthalmia neonatorum	1
Pneumonia	7
Poliomyelitis	1
Scarlet fever	75
Smallpox	2
Tuberculosis	51
Typhoid fever	39
Whooping cough	33

MONTANA

Cerebrospinal meningitis	3
Chicken pox	16
Diphtheria	1
Measles	25
Scarlet fever	46
Tuberculosis	8
Typhoid fever	2
Whooping cough	5

NEBRASKA

Cerebrospinal meningitis	1
Chicken pox	17
Diphtheria	7
Measles	1
Mumps	3
Pneumonia	1
Scarlet fever	22
Smallpox	5
Tuberculosis	8
Typhoid fever	2
Whooping cough	12

NEW JERSEY

Cerebrospinal meningitis	2
Chicken pox	37
Diphtheria	82
Measles	16
Pneumonia	49
Poliomyelitis	1
Scarlet fever	65
Trachoma	1
Typhoid fever	25
Whooping cough	80

NEW YORK

(Exclusive of New York City)

	Cases
Chicken pox	95
Diphtheria	61
German measles	19
Malaria	6
Measles	101
Mumps	24
Paratyphoid fever	1
Pneumonia	114
Poliomyelitis	20
Scarlet fever	69
Tetanus	1
Trachoma	2
Typhoid fever	31
Vincent's angina	4
Whooping cough	149

NORTH CAROLINA

Cerebrospinal meningitis	1
Chicken pox	6
Diphtheria	173
Dysentery (bacillary)	1
German measles	5
Malaria	17
Measles	15
Ophthalmia neonatorum	1
Poliomyelitis	5
Scarlet fever	83
Septic sore throat	3
Smallpox	7
Typhoid fever	59
Whooping cough	91

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Cerebrospinal meningitis	
Jefferson County	1
Love County	1
Diphtheria	44
Influenza	82
Malaria	163
Measles	10
Pellagra	7
Pneumonia	26
Poliomyelitis	
Love County	1
Tulsa County	1
Scarlet fever	28
Smallpox	2
Typhoid fever	128
Whooping cough	14

OREGON

Cerebrospinal meningitis	3
Chicken pox	19
Diphtheria	7
Influenza	10
Measles	17
Mumps	7
Pneumonia	[1] 7
Poliomyelitis	1
Scarlet fever	51
Smallpox	10
Tuberculosis	11
Typhoid fever	13
Whooping cough	6

PENNSYLVANIA

	Cases
Anthrax—Bridgeport	1
Cerebrospinal meningitis	
Carbondale	1
East Brandywine Township [2]	1
Johnstown	1
Turtle Creek	1
Chicken pox	222
Diphtheria	196
German measles	29
Impetigo contagiosa	26
Lethargic encephalitis—York	1
Measles	268
Mumps	28
Ophthalmia neonatorum—Philadelphia	3
Pellagra—Philadelphia	1
Pneumonia	19
Poliomyelitis	
Clintonville	2
Erie	1
Freedom	4
Johnstown	1
Scattering	4
Scabies	8
Scarlet fever	209
Tetanus—Harrisburg	1
Trachoma—Altoona	1
Tuberculosis	101
Typhoid fever	99
Whooping cough	241

SOUTH DAKOTA

Chicken pox	4
Diphtheria	3
Measles	69
Scarlet fever	17
Smallpox	2
Trachoma	2
Typhoid fever	1
Whooping cough	13

TENNESSEE

Cerebrospinal meningitis	
Davidson County	1
Nashville	1
Chicken pox	10
Diphtheria	96
Dysentery	3
Influenza	24
Malaria	60
Measles	1
Mumps	1
Ophthalmia neonatorum	2
Pellagra	5
Pneumonia	21
Rabies	1
Scarlet fever	66
Smallpox	1
Tuberculosis	35
Typhoid fever	131
Whooping cough	58

TEXAS

Chicken pox	3
Diphtheria	58
Influenza	15
Mumps	28

[1] Deaths

[2] County not specified

TEXAS—continued

	Cases
Paratyphoid fever	3
Pellagra	2
Pneumonia	3
Scarlet fever	25
Smallpox	4
Tuberculosis	20
Typhoid fever	19
Whooping cough	5

UTAH

	Cases
Chicken pox	13
Diphtheria	7
German measles	3
Influenza	5
Measles	58
Pneumonia	1
Scarlet fever	3
Smallpox	4
Typhoid fever	4
Whooping cough	9

VERMONT

	Cases
Chicken pox	7
Diphtheria	2
Measles	49
Mumps	2
Scarlet fever	4
Whooping cough	21

WASHINGTON

	Cases
Cerebrospinal meningitis:	
King County	1
Seattle	1
Chicken pox	69
Diphtheria	41
Measles	11
Mumps	23
Poliomyelitis	1
Scarlet fever	71
Smallpox	17
Tuberculosis	5
Typhoid fever	7
Whooping cough	8

WEST VIRGINIA

	Cases
Chicken pox	15
Diphtheria	38
Influenza	7
Measles	15
Scarlet fever	60
Smallpox	2
Tuberculosis	31
Typhoid fever	81
Whooping cough	69

WISCONSIN

	Cases
Milwaukee:	
Chicken pox	36
Diphtheria	17
German measles	1
Measles	5
Mumps	13
Pneumonia	16
Scarlet fever	18
Tuberculosis	18
Whooping cough	46
Scattering:	
Cerebrospinal meningitis	2
Chicken pox	31
Diphtheria	35
German measles	3
Influenza	13
Measles	111
Mumps	8
Pneumonia	7
Poliomyelitis	3
Scarlet fever	48
Smallpox	2
Tuberculosis	11
Typhoid fever	7
Whooping cough	102

WYOMING

	Cases
Chicken pox	1
Measles	15
Mumps	1
Pneumonia (lobar)	1
Poliomyelitis—Converse County	1
Rabies (human)—Natrona County	1
Scarlet fever	3
Septic sore throat	1
Tuberculosis	1
Tularemia	2
Typhoid fever	1
Typhus fever	2
Whooping cough	6

Reports for Week Ended October 9, 1926

ARIZONA

	Cases
Diphtheria	1
Measles	1
Mumps	3
Scarlet fever	7
Trachoma	82
Tuberculosis	30

CALIFORNIA

	Cases
Cerebrospinal meningitis:	
Sacramento	1
San Francisco	1
Chicken pox	105
Diphtheria	143
Influenza	18
Leprosy—Los Angeles	2
Measles	355
Poliomyelitis:	
Burbank	1
Glendale	1
Los Angeles	1
Scarlet fever	129
Smallpox	11
Tuberculosis	172
Typhoid fever	14
Whooping cough	47

DISTRICT OF COLUMBIA

	Cases
Chicken pox	1
Diphtheria	25
Influenza	2
Measles	2
Pneumonia	11
Scarlet fever	10
Tuberculosis	33
Typhoid fever	3
Whooping cough	3

NORTH DAKOTA

	Cases
Chicken pox	15
Diphtheria	3
Measles	18
Mumps	4
Pneumonia	1
Poliomyelitis	2
Scarlet fever	37
Smallpox	2
Trachoma	1

NORTH DAKOTA—continued

	Cases
Tuberculosis	1
Typhoid fever	1
Whooping cough	25

SOUTH CAROLINA

	Cases
Chicken pox	14
Dengue	18
Diphtheria	81
Hookworm disease	31
Influenza	259
Malaria	630
Measles	1
Paratyphoid fever	4
Pellagra	51
Poliomyelitis	4
Scarlet fever	23
Smallpox	1
Tuberculosis	45
Typhoid fever	75
Whooping cough	45

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
September, 1926										
Georgia		165	64	284	21	12	2	37	20	339
Iowa	2	45			20		8	60	10	9
Massachusetts	11	209	30	3	70	2	59	353	0	51
New Jersey	3	173	3	2	36		12	174	0	138
North Dakota		6			24		3	104	16	14
Tennessee	2	140	43	376	25	25	8	130	7	881
Wisconsin	4	117	55		381		8	198	19	43

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended October 2, 1926, 38 States reported 1,421 cases of diphtheria. For the week ended October 3, 1925, the same States reported 1,426 cases of this disease. One hundred cities, situated in all parts of the country and having an aggregate population of more than 30,350,000, reported 744 cases of diphtheria for the week ended October 2, 1926. Last year for the corresponding week they reported 661 cases. The estimated expectancy for these cities was 912 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles—Thirty-seven States reported 856 cases of measles for the week ended October 2, 1926, and 433 cases of this disease for the week ended October 3, 1925. One hundred cities reported 212 cases of measles for the week this year, and 224 cases last year

Poliomyelitis.—The health officers of 37 States reported 79 cases of poliomyelitis for the week ended October 2, 1926. The same States reported 282 cases for the week ended October 3, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-eight States—this year, 1,533 cases; last year, 1,174 cases; 100 cities—this year, 584 cases, last year, 493 cases; estimated expectancy, 492 cases.

Smallpox.—For the week ended October 2, 1926, 38 States reported 70 cases of smallpox. Last year for the corresponding week they reported 70 cases. One hundred cities reported smallpox for the week as follows: 1926, 6 cases; 1925, 11 cases, estimated expectancy, 17 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—One thousand one hundred and eighty-three cases of typhoid fever were reported for the week ended October 2, 1926, by 38 States. For the corresponding week of 1925, the same States reported 1,132 cases of this disease. One hundred cities reported 246 cases of typhoid fever for the week this year and 222 cases for the corresponding week last year. The estimated expectancy for these cities was 218 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 94 cities, with a population of more than 29,690,000, as follows: 1926, 427 deaths; 1925, 367 deaths.

City reports for week ended October 2, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	0	1	1	0	0	2	0	4
New Hampshire									
Concord	22,546	0	1	0	0	1	0	0	2
Manchester	83,097		4	0	0	0	0		0
Vermont									
Barre	10,008	1	0	0	0	0	0	0	0
Massachusetts									
Boston	779,620	10	38	17	6	0	4	16	13
Fall River	128,993	0	4	3	0	0	0	0	2
Springfield	142,065	0	3	1	0	0	0	2	0
Worcester	190,757	8	5	3	0	0	0	0	3

City reports for week ended October 2, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND—con									
Rhode Island									
Pawtucket	69,760	2	1	0	0	0	0	0	0
Providence	267,918	0	5	1	2	0	1	0	3
Connecticut									
Bridgeport	[1]	0	8	2	0	0	1	0	3
Hartford	160,197	2	6	0	0	0	1	0	5
New Haven	178,927	0	3	0	0	0	0	0	2
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	11	18	5		0	3	0	5
New York	5,873,356	0	118	102	11	4	9	22	58
Rochester	316,786	2	8	3		0	1	0	7
Syracuse	182,003	0	7	2		0	3	1	1
New Jersey									
Camden	128,642	1	4	1	0	0	0	0	1
Newark	452,513	4	12	6	0	0	0	1	4
Trenton	132,020	0	4	1	0	0	0	0	0
Pennsylvania									
Philadelphia	1,979,364	8	51	37		1	2	4	26
Pittsburgh	631,563	15	23	6		0	3	0	10
Reading	112,707	3	3	0		0	0	0	1
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	0	14	3	0	0	0	5	3
Cleveland	936,485	19	37	32	1	0	1	1	10
Columbus	279,836	0	6	3	0	2	0	0	3
Toledo	287,380	1	13	7	0	2	2	0	3
Indiana									
Fort Wayne	97,846	1	3	1	0	0	0	0	2
Indianapolis	358,819	13	12	15	0	0	0	0	7
South Bend	80,091	0	1	2	0	0	0	0	1
Terre Haute	71,071	0	1	0	0	1	0	0	1
Illinois									
Chicago	2,995,239	18	101	49	10	3	26	4	35
Peoria	81,564	0	2	0	0	0	8	0	1
Springfield	63,923	1	2	0	0	0	2	0	1
Michigan									
Detroit	1,245,824	11	46	69	3	1	1	6	14
Flint	130,316	10	10	4	0	0	0	0	1
Grand Rapids	153,698	3	4	5	0	1	0	0	0
Wisconsin									
Kenosha	50,891	0	1	0	0	0	3	0	0
Madison	46,385	0	1	4	0	0	1	0	0
Milwaukee	509,192	11	18	10	0	0	1	6	7
Racine	67,707	4	1	0	0	0	3	1	0
Superior	39,671		1						
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	7	2	0	0	0	4	0	2
Minneapolis	425,435	9	26	28	0	0	0	2	6
St. Paul	246,001	3	18	11	0	0	0	0	8
Iowa									
Davenport	52,469	0	2	0	0		0	0	
Des Moines	141,441	0	7	3	0		0	0	
Sioux City	76,411	0	2	4	0		0	2	
Waterloo	36,771	5	0	0	0		0	2	
Missouri									
Kansas City	367,481	3	9	0	1	0	0	1	7
St. Joseph	78,342	0	3	0	0	0	0	0	1
St. Louis	821,543	6	32	26	0	0	1	0	
North Dakota									
Fargo	26,403	2	0	1	0	0	0	6	0
Grand Forks	14,811	0	1	0	0		0	0	
South Dakota								0	
Aberdeen	15,036	0	0	0	0		0	0	
Sioux Falls	30,127	0	1	1	0	0	0	0	0
Nebraska									
Lincoln	60,941	0	0	0	0	0	0	0	0
Omaha	211,768	2	15	0	0	0	0	1	5
Kansas									
Topeka	55,411	0	1	1	0	0	0	0	0
Wichita	88,367	2	2	0	0	0	0	0	4

[1] No estimate made.

City reports for week ended October 2, 1926—Continued

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	1	1	0	0	0	0	1
Maryland									
Baltimore	796,296	2	19	11	3	0	3	4	9
Cumberland	33,741	0	1	0	0	0	0	0	1
Frederick	12,035	0	0	1	0	0	0	0	0
District of Columbia									
Washington	497,[illegible]	0	10	10	0	0	1	0	6
Virginia									
Lynchburg	30,395	0	1	0	0	0	0	0	0
Norfolk	(1)	0	2	1	0	0	0	0	4
Richmond	18[illegible],403	0	20	15	0	2	0	1	1
Roanoke	58,208	0	5	4	0	0	0	0	0
West Virginia									
Charleston	49,019	0	2	2	0	0	0	0	0
Huntington	63,485	0	3	2	0	0	0	0	3
Wheeling	56,208	1	2	0	0	1	0	0	1
North Carolina									
Raleigh	30,371	1	4	8	0	0	0	0	0
Wilmington	37,061	0	1	1	0	0	0	0	0
Winston-Salem	69,031	0	4	0	0	1	1	0	0
South Carolina									
Charleston	73,125	0	1	3	1	1	0	0	5
Columbia	41,225	0	2	1	0	0	0	0	0
Greenville	27,311	0	2	6	0	0	0	0	0
Georgia									
Atlanta	(1)	0	8	15	7	0	1	2	5
Brunswick	16,809	0	0	0	0	0	0	6	0
Savannah	93,134	0	3	2	5	0	1	0	2
Florida									
Miami	69,754	0	------	3	2	0	0	4	4
St Petersburg	26,847	------	0	------	------	0	------	------	0
Tampa	94,743	0	1	0	0	0	0	0	0
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	2	14	0	0	0	0	2
Louisville	305,935	2	10	2	1	0	1	0	5
Tennessee									
Memphis	174,533	1	8	5	0	1	0	1	3
Nashville	136,220	0	3	14	0	0	0	0	3
Alabama									
Birmingham	205,670	0	7	2	0	0	0	1	4
Mobile	65,955	0	2	0	0	1	0	0	4
Montgomery	46,481	0	1	15	0	0	0	1	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	1	0	0	------	0	0	------
Little Rock	74,216	0	1	0	0	0	0	0	1
Louisiana									
New Orleans	414,493	0	9	6	3	4	0	0	9
Shreveport	57,857	0	1	2	0	0	0	0	2
Oklahoma									
Oklahoma City	(1)	0	2	3	8	0	0	0	1
Texas									
Dallas	194,450	2	6	22	7	4	0	0	0
Galveston	48,375	0	0	0	0	0	0	0	1
Houston	164,954	0	2	9	0	0	0	0	1
San Antonio	198,069	1	0	10	0	0	0	0	1
MOUNTAIN									
Montana									
Billings	17,971	3	1	0	0	0	0	0	2
Great Falls	29,883	0	0	2	0	0	0	0	1
[illegible]	12,037	0	0	1	0	0	0	0	0
[illegible]	12,668	2	0	0	0	0	0	0	1
[illegible]									
[illegible]	23,042	0	1	0	0	0	0	0	0

1 No estimate made.

City reports for week ended October 2, 1926—Continued

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
MOUNTAIN—continued									
Colorado									
Denver	280,911	3	12	19	0	2	1	0	4
Pueblo	43,787	2	5	0	0	0	1	0	3
New Mexico									
Albuquerque	21,000	0	1	0	0	0	2	1	0
Arizona									
Phoenix	38,669	0	0	1	0	0	1	0	1
Utah									
Salt Lake City	130,948	6	3	10	0	0	10	0	6
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	9	5	9	0		1	13	
Spokane	108,897	5	3	7	0		1	0	
Tacoma	104,455	1	3	4	0	0	0	0	1
Oregon									
Portland	282,383	2	6	3	0	0	3	5	9
California									
Los Angeles	(1)	5	30	30	4	1	1	10	4
Sacramento	72,260	0	2	1	0	0	9	3	1
San Francisco	557,530	18	15	14	1	1	110	27	2

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	1	0	0	0	0	2	1	0	0	4	28
New Hampshire:											
Concord	0	0	0	0	0	0	0	1	0	0	9
Manchester	0	3	0	0	0	0	0	0	0		26
Vermont											
Barre	0	0	0	0	0	0	0	0	0	0	5
Massachusetts											
Boston	18	24	0	0	0	11	4	2	1	18	176
Fall River	1	3	0	0	0	3	3	3	0	4	30
Springfield	3	2	0	0	0	0	0	0	0	0	21
Worcester	4	8	0	0	0	2	0	0	0	2	45
Rhode Island											
Pawtucket	1	0	0	0	0	0	0	0	0	3	19
Providence	3	1	0	0	0	2	2	1	0	4	63
Connecticut											
Bridgeport	2	4	0	0	0	0	1	0	0	0	22
Hartford	2	2	0	0	0	3	2	0	0	2	41
New Haven	3	0	0	0	0	3	3	0	0	0	38
MIDDLE ATLANTIC											
New York:											
Buffalo	10	2	0	0	0	15	2	3	0	9	140
New York	45	43	1	0	0	[2] 95	37	27	6	68	1,146
Rochester	4	3	0	0	0	2	2	0	0	7	77
Syracuse	5	4	0	0	0	3	2	0	0	25	45
New Jersey											
Camden	2	4	0	0	0	0	2	3	0	1	26
Newark	7	4	0	0	0	6	3	1	0	30	88
Trenton	1	1	0	0	0	6	1	0	0	0	36
Pennsylvania											
Philadelphia	28	28	0	0	0	38	14	12	1	30	425
Pittsburgh	20	11	0	0	0	9	4	11	2	17	136
Reading	1	3	0	0	0	0	2	0	0	7	17

[1] No estimate made.

[2] Pulmonary tuberculosis only.

City reports for week ended October 3, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
EAST NORTH CENTRAL											
Ohio											
Cincinnati	7	9	1	0	0	9	2	7	2	12	100
Cleveland	15	12	0	0	0	17	4	14	1	26	169
Columbus	4	5	0	0	0	6	2	4	0	6	75
Toledo	6	13	1	0	0	5	3	9	0	17	81
Indiana											
Fort Wayne	1	2	0	0	0	1	1	0	1	0	21
Indianapolis	5	8	1	0	0	4	3	6	0	15	83
South Bend	2	1	0	0	0	1	0	0	0	1	15
Terre Haute	1	5	0	0	0	0	0	0	0	0	21
Illinois											
Chicago	53	47	1	0	0	54	7	10	0	39	587
Peoria	6	1	0	0	0	0	1	0	0	0	17
Springfield	1	2	0	0	0	0	2	0	0	1	8
Michigan											
Detroit	36	35	2	0	0	16	6	6	1	37	269
Flint	6	9	0	0	0	0	1	1	0	1	21
Grand Rapids	5	1	0	0	0	1	1	1	0	2	27
Wisconsin											
Kenosha	1	1	0	0	0	0	0	0	0	8	11
Madison	0	2	0	0	0	0	1	0	0	7	6
Milwaukee	16	6	1	0	0	3	1	0	0	40	85
Racine	3	1	0	0	0	0	0	0	0	4	11
Superior	1	-------	0	-------	-------	-------	0	-------	-------	-------	-------
WEST NORTH CENTRAL											
Minnesota:											
Duluth	5	6	0	0	0	1	0	0	0	3	19
Minneapolis	21	40	0	0	0	3	1	3	1	0	88
St Paul	10	16	2	0	0	4	2	2	0	8	55
Iowa											
Davenport	1	1	0	0	-------	-------	0	0	-------	0	-------
Des Moines	5	1	0	0	-------	-------	0	0	-------	0	-------
Sioux City	1	1	0	0	-------	-------	1	0	-------	0	-------
Waterloo	2	2	0	0	-------	-------	0	0	-------	1	-------
Missouri											
Kansas City	5	6	0	0	0	6	3	1	0	5	84
St Joseph	2	2	0	0	0	0	0	3	0	1	18
St Louis	19	16	0	0	0	9	5	4	0	8	190
North Dakota											
Fargo	0	8	0	0	0	0	0	0	0	1	6
Grand Forks	1	5	0	0	-------	-------	0	0	-------	0	-------
South Dakota											
Aberdeen	1	1	0	0	-------	-------	0	0	-------	3	-------
Sioux Falls	1	0	0	0	0	0	0	0	0	0	-------
Nebraska											
Lincoln	1	4	0	0	0	1	0	0	0	2	21
Omaha	2	4	1	0	0	2	1	0	0	0	55
Kansas											
Topeka	2	0	0	1	0	0	1	7	1	8	13
Wichita	2	3	0	0	0	1	2	0	0	1	35
SOUTH ATLANTIC											
Delaware											
Wilmington	1	2	0	0	0	1	0	0	0	0	18
Maryland											
Baltimore	7	4	0	0	0	18	11	8	0	25	195
Cumberland	1	0	0	0	0	2	1	2	0	0	10
Frederick	0	1	0	0	0	0	0	0	0	0	3
District of Columbia											
Washington	8	12	0	0	0	11	5	7	1	27	123
Virginia											
Lynchburg	1	3	0	0	0	0	1	8	0	4	10
Norfolk	0	1	0	0	0	2	1	2	0	0	-------
Richmond	6	8	0	0	0	2	2	4	0	1	46
Roanoke	2	3	0	0	0	0	2	1	0	1	16
West Virginia:											
Charleston	1	1	0	0	0	0	2	5	0	3	11
Huntington	2	3	0	0	0	0	0	0	0	0	22
Wheeling	3	2	0	0	0	2	2	0	0	0	18

City reports for week ended October 2, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
SOUTH ATLANTIC—continued											
North Carolina											
Raleigh	1	1	0	0	0	1	1	0	0	2	7
Wilmington	1	3	0	1	0	0	0	0	0	6	8
Winston-Salem	2	6	0	0	0	0	1	3	0	3	23
South Carolina											
Charleston	0	0	0	0	0	1	2	1	0	0	26
Columbia	0	0	0	0	0	0	0	1	0	0	------
Greenville	0	1	0	0	0	0	0	0	0	2	3
Georgia											
Atlanta	5	6	0	1	0	5	4	11	0	0	69
Brunswick	0	0	0	0	0	0	0	0	0	0	2
Savannah	0	3	0	0	0	3	1	8	2	0	26
Florida											
Miami	------	0	------	0	0	0	------	0	0	1	40
St. Petersburg	0	------	0	------	0	0	0	------	0	------	4
Tampa	0	2	0	0	0	4	0	0	1	0	32
EAST SOUTH CENTRAL											
Kentucky											
Covington	0	1	0	0	0	3	0	0	0	0	17
Louisville	2	3	0	0	0	4	5	3	1	3	82
Tennessee											
Memphis	2	5	0	0	0	1	4	7	0	5	52
Nashville	4	4	0	0	0	5	4	10	0	10	49
Alabama											
Birmingham	5	6	0	0	0	3	6	4	1	6	58
Mobile	1	0	0	0	0	0	1	1	0	0	20
Montgomery	1	0	0	0	0	0	1	0	0	2	12
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	0	0	0	0	------	------	0	0	------	0	------
Little Rock	1	2	0	0	0	2	2	1	0	0	------
Louisiana											
New Orleans	2	1	0	0	0	0	4	5	0	1	133
Shreveport	1	1	0	0	0	3	1	0	0	0	35
Oklahoma:											
Oklahoma City	1	1	0	0	0	1	2	3	0	0	14
Texas											
Dallas	3	9	0	0	0	2	2	4	1	1	41
Galveston	0	2	0	0	0	0	0	0	0	0	7
Houston	1	1	0	0	0	1	0	1	2	0	53
San Antonio	0	0	0	0	0	5	1	0	0	0	33
MOUNTAIN											
Montana.											
Billings	1	0	0	0	0	0	0	0	0	2	4
Great Falls	1	0	0	0	0	0	0	2	0	0	8
Helena	0	0	0	0	0	0	0	0	0	0	7
Missoula	0	9	0	0	0	0	1	0	0	0	12
Idaho											
Boise	1	0	0	1	0	0	0	1	0	0	6
Colorado											
Denver	5	20	1	0	0	8	4	0	1	3	77
Pueblo	1	0	1	0	0	0	1	1	0	0	11
New Mexico											
Albuquerque	0	0	0	0	0	4	3	0	0	1	10
Arizona											
Phoenix	------	0	0	0	0	7	1	0	0	0	12
Utah											
Salt Lake City	2	6	0	0	0	3	3	5	0	6	29
Nevada											
Reno	1	0	0	0	0	1	0	0	0	0	2

City reports for week ended October 2, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
PACIFIC											
Washington											
Seattle	7	23	1	0	--------	--------	1	3	--------	2	--------
Spokane	7	4	1	0	--------	--------	1	1	--------	1	--------
Tacoma	2	0	0	2	0	1	1	0	0	0	23
Oregon											
Portland	5	26	2	4	0	1	3	0	0	0	62
California											
Los Angeles	8	21	2	0	0	20	5	2	0	2	201
Sacramento	1	3	1	0	0	3	1	1	0	0	25
San Francisco	6	14	0	0	0	9	1	0	1	3	121

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis (infantile paralysis): Cases	Poliomyelitis (infantile paralysis): Deaths
NEW ENGLAND									
Massachusetts									
Boston	1	1	0	0	0	0	2	1	0
Fall River	1	2	0	0	0	0	0	0	0
Springfield	0	0	0	0	0	0	0	2	0
Worcester	0	0	0	0	4	0	0	0	0
MIDDLE ATLANTIC									
New York									
Buffalo	0	0	0	0	0	0	1	9	1
New York	2	1	6	2	0	1	14	2	3
Rochester	0	0	0	0	0	0	1	2	1
New Jersey									
Newark	0	0	2	1	0	0	1	1	0
Pennsylvania									
Pittsburgh	0	0	0	1	0	0	0	0	0
Reading	0	0	0	0	0	0	0	1	0
EAST NORTH CENTRAL									
Ohio									
Cleveland	0	0	0	0	0	0	1	4	0
Columbus	0	0	0	1	0	0	0	0	0
Indiana									
Indianapolis	2	0	0	0	0	0	0	0	0
Illinois									
Chicago	1	0	1	0	2	1	5	0	0
Michigan									
Detroit	1	0	2	1	0	0	1	7	0
Wisconsin									
Milwaukee	0	0	1	1	0	0	0	0	0
WEST NORTH CENTRAL									
Missouri									
Kansas City	1	0	0	0	0	0	0	0	0
SOUTH ATLANTIC [1]									
Maryland									
Baltimore	0	0	0	0	1	0	1	1	1
District of Columbia									
Washington	0	0	0	0	0	0	1	1	1
Virginia									
Norfolk	0	0	0	0	0	0	0	1	1
Richmond	0	0	0	0	0	0	0	1	0

[1] Dengue, 1 case at Miami, Fla.

City reports for week ended October 2, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
SOUTH ATLANTIC—continued									
North Carolina									
Raleigh	0	0	0	0	0	1	0	0	0
Georgia									
Atlanta	0	0	0	0	0	1	0	0	0
Savannah	0	0	0	0	0	0	0	1	1
EAST SOUTH CENTRAL									
Tennessee									
Memphis	1	0	0	0	1	0	0	0	0
Alabama									
Birmingham	0	0	0	0	1	0	0	0	0
Mobile	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	3	0	0	0
Louisiana									
New Orleans	0	0	0	0	1	0	0	0	0
Shreveport	0	0	0	0	0	2	0	0	0
Texas									
Dallas	0	0	0	1	0	2	0	0	0
Houston	1	1	0	0	0	1	0	0	0
San Antonio	0	0	0	0	0	1	0	0	0
MOUNTAIN									
Colorado									
Denver	0	0	0	1	0	0	0	0	0
PACIFIC									
Oregon									
Portland	0	0	0	0	0	0	0	1	0
California									
Los Angeles	0	0	1	0	0	0	1	1	0
Sacramento	0	0	0	0	0	0	0	1	1
San Francisco	1	0	0	0	0	0	1	1	0

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended October 2, 1926, compared with those for a like period ended October 3, 1925 The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, August 29 to October 2, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926
101 cities	[2] 70	74	92	76	[3] 95	[4] 84	[3] 97	107	[5] 115	[5] 128
New England	13	26	74	38	159	35	81	73	74	66
Middle Atlantic	61	59	89	53	83	63	81	70	84	81
East North Central	57	101	70	80	76	95	101	128	[5] 130	[5] 135
West North Central	100	66	143	75	145	35	153	127	192	143
South Atlantic	106	63	110	137	88	111	109	128	207	163
East South Central	32	42	74	104	74	109	58	135	63	270
West South Central	31	60	149	86	57	77	75	69	62	211
Mountain	395	91	194	173	[3] 217	237	[3] 189	137	129	291
Pacific	[2] 73	135	75	92	130	[4] 97	102	213	102	175

MEASLES CASE RATES

101 cities	[2] 22	25	22	25	[3] 29	[4] 23	[3] 35	37	[5] 39	[5] 36
New England	50	33	91	35	108	19	177	38	242	21
Middle Atlantic	25	17	25	11	31	10	33	9	35	10
East North Central	20	30	16	18	22	23	23	22	[5] 21	[5] 24
West North Central	6	10	4	10	8	12	6	28	6	10
South Atlantic	23	9	21	19	15	9	29	11	23	13
East South Central	0	31	0	16	5	16	11	10	11	5
West South Central	0	0	4	4	4	4	0	0	0	0
Mountain	0	36	9	100	[3] 9	73	[3] 23	118	9	108
Pacific	[2] 26	92	8	159	14	[4] 225	19	310	3	329

SCARLET FEVER CASE RATES

101 cities	[2] 54	51	51	58	[3] 60	[4] 67	[3] 63	79	[5] 86	[5] 100
New England	46	59	62	80	60	76	46	71	86	104
Middle Atlantic	30	27	31	32	46	44	48	56	62	51
East North Central	58	59	57	62	58	64	65	80	[5] 96	[5] 99
West North Central	123	131	102	93	153	129	135	153	176	197
South Atlantic	56	38	51	56	36	49	61	79	67	111
East South Central	131	57	110	109	53	119	74	83	74	99
West South Central	35	26	31	47	40	30	13	52	48	69
Mountain	74	82	37	73	[3] 161	82	[3] 85	118	176	319
Pacific	[2] 50	70	36	89	64	[4] 123	77	119	83	175

SMALLPOX CASE RATES

101 cities	[2] 5	2	5	2	[3] 6	[4] 1	[3] 5	3	[5] 2	[5] 1
New England	40	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	1	0	0	0	0	0	1	0	0
East North Central	5	0	2	2	2	0	2	1	[5] 0	[5] 0
West North Central	4	0	0	2	2	0	2	2	2	2
South Atlantic	2	9	12	2	12	9	6	6	0	4
East South Central	11	10	21	0	37	0	32	0	0	0
West South Central	4	4	4	0	4	4	0	13	0	0
Mountain	9	0	18	0	[3] 0	0	[3] 38	0	9	9
Pacific	[2] 38	13	41	16	47	[4] 0	39	19	25	5

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Spokane, Wash., not included.
[3] Helena, Mont., not included.
[4] Tacoma, Wash., not included.
[5] Superior, Wis., not included.

Summary of weekly reports from cities, August 29 to October 2, 1926—Annual rates per 100,000 population—Compared with rates for the corresponding period of 1925—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926
101 cities	[2] 38	40	41	45	[3] 49	[4] 50	[3] 44	41	[5] 39	[5] 42
New England	29	12	34	17	23	33	22	9	40	17
Middle Atlantic	29	34	27	34	35	35	34	45	32	28
East North Central	17	20	20	23	18	29	29	26	[5] 20	[5] 34
West North Central	22	42	57	50	57	26	16	28	37	40
South Atlantic	58	92	48	105	104	81	88	92	50	115
East South Central	168	176	226	285	191	249	200	166	131	130
West South Central	164	43	70	33	159	69	97	77	92	47
Mountain	28	9	129	18	[3] 85	82	[3] 64	36	111	82
Pacific	[2] 29	46	28	27	28	[4] 37	22	22	28	19

INFLUENZA DEATH RATES

	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926
95 cities	2	3	4	4	[3] 5	[4] 4	[3] 3	6	[5] 5	[5] 6
New England	0	0	2	0	0	0	0	5	0	2
Middle Atlantic	3	2	3	4	6	3	3	3	3	2
East North Central	3	4	7	4	4	3	4	3	[5] 5	[5] 5
West North Central	2	4	0	0	6	4	4	8	6	0
South Atlantic	2	0	0	0	2	6	2	9	4	9
East South Central	0	16	5	0	5	5	0	10	16	10
West South Central	5	9	5	19	10	24	0	24	19	38
Mountain	18	9	28	36	[3] 19	0	[3] 9	9	0	18
Pacific	0	0	4	0	0	[4] 8	4	7	0	7

PNEUMONIA DEATH RATES

	Sept 5, 1925	Sept 4, 1926	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926
95 cities	70	51	61	51	[3] 60	[4] 53	[3] 54	65	[5] 61	[5] 69
New England	53	50	50	40	67	54	53	76	31	87
Middle Atlantic	84	59	68	65	61	51	66	70	68	71
East North Central	59	34	46	37	44	40	39	45	[5] 44	[5] 58
West North Central	32	36	36	30	45	51	26	55	36	70
South Atlantic	54	64	60	41	81	54	86	79	81	66
East South Central	131	52	142	42	79	52	42	88	100	109
West South Central	73	52	82	104	77	123	48	99	63	71
Mountain	83	64	37	64	[3] 113	118	[3] 76	55	139	155
Pacific	95	78	91	57	82	[4] 57	51	78	87	28

[2] Spokane, Wash., not included.
[3] Helena, Mont., not included.
[4] Tacoma, Wash., not included.
[5] Superior, Wis., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectfully

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

PLAGUE ON VESSEL

Further relative to plague infection on the S. S "Zaria"—Liverpool, England, from West African ports—Further information dated September 18, 1926, relative to plague infection on the steamship *Zaria* at Liverpool, England, from West African ports, shows that of 70 rats caught or found dead on the *Zaria* 29 rats were found plague infected The *Zaria* arrived at Liverpool September 12, from Lagos, via West African ports, with history of two fatal plague cases in native firemen during the voyage Four plague-infected rats were found on the vessel after arrival at Liverpool.[1]

THE FAR EAST

Report for week ended September 25, 1926—The following report for the week ended September 25, 1926, was transmitted by the Far Eastern Bureau of the Secretariat of the Health Section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
British India						
Calcutta	----	0	----	7	3	3
Bombay	----	0	----	0	8	3
Madras	----	0	----	3	4	0
Rangoon	----	6	----	0	0	0
Negapatam	----	0	----	0	2	0

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Ceylon Colombo	0	0	0	0	3	0
Siam Bangkok	0	0	3	0	7	4
China						
Amoy	0	0	42	----	0	0
Shanghai	0	0	31	15	0	0
Kwantung Dairen	0	0	1	0	0	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia—Aden.
Iraq—Basra.
Persia.—Mohammerah, Bender, Abbas, Bushire
British India.—Karachi, Chittagong, Cochin, Vizagapatam, Tuticorin.
Federated Malay States.—Port Swettenham.

[1] Public Health Reports, Oct 8, 1926, p 2219

Straits Settlements—Singapore Penang

Dutch East Indies—Batavia, Surabaya, Samarang, Belawan Deli, Palembang, Sabang, Makassar, Banjermasin, Tarakan, Padang Cheribon, Balik-Papan

Sarawak.—Kuching

British North Borneo—Sandakan, Jesselton, Kudat Tawao

Portuguese Timor—Dilly.

Philippine Islands—Manila, Iloilo Jolo, Cebu, Zamboanga

French Indo-China—Saigon and Cholon, Turane, Haiphong

China—Hongkong

Formosa—Keelung

Japan—Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki

Korea—Chemulpo, Fusan

Manchuria—Antung, Mukden, Changchun, Harbin

Kwantung—Port Arthur

U S S R—Vladivostok.

AUSTRALASIA AND OCEANIA

Australia—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Garnarvon, Thursday Island

New Guinea—Port Moresby

New Zealand—Auckland, Wellington, Christchurch Invercargill, Dunedin

New Caledonia—Noumea

Fiji—Suva

Hawaii—Honolulu

Society Islands—Papeete

AFRICA

Egypt—Port Said, Suez, Alexandria.

Anglo-Egyptian Sudan—Port Sudan, Suakin.

Eritrea—Massaua

French Somaliland—Jibuti.

British Somaliland.—Berbera.

Italian Somaliland.—Mogadiscio.

Kenya—Mombasa.

Zanzibar—Zanzibar.

Tanganyika.—Dar-es-Salaam

Seychelles—Victoria.

Mauritius—Port Louis

Portuguese East Africa—Mozambique, Beira, Lourenço-Marques.

Union of South Africa—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

Dutch East Indies—Samarinda, Pontianak, Menado.

Madagascar.—Tamatave, Majunga.

BRAZIL

Plague—Paranagua—October 8, 1926.—Information was received under date of October 8, 1926, of the presence of plague at the port of Paranagua, State of Paraná, Brazil.

CHILE

Mortality—Concepcion—July, 1926.—During the month of July, 1926, 176 deaths from all causes were reported at Concepcion, Chile (population, 64,780) Of these, 64 deaths were in children under 1 year of age. Causes of deaths were reported as follows: Bronchopneumonia, 11, diseases of the heart, 11; dysentery, 1; influenza, 1; meningitis, 7, pneumonia, 25; tuberculosis, 30 Mortality from pneumonia, tuberculosis, and diseases of the respiratory system generally was stated to have been above the average, due to excessive rainfall and damp, cold weather

CUBA

Communicable diseases—Habana—August and September, 1926.—During the months of August and September, 1926, communicable diseases were reported at Habana, Cuba, as follows.

August

Disease	New cases	Deaths	Remaining under treatment Aug 31, 1926	Disease	New cases	Deaths	Remaining under treatment Aug 31, 1926
Chicken pox	3		2	Measles	14		15
Diphtheria	9		1	Paratyphoid fever	4		1
Leprosy			9	Scarlet fever	7		4
Malaria [1]	114	2	40	Typhoid fever [1]	44	7	38

September

Disease	New cases	Deaths	Remaining under treatment Sept 30, 1926	Disease	New cases	Deaths	Remaining under treatment Sept 30, 1926
Chicken pox	6		2	Measles	4		3
Diphtheria	8	1	2	Paratyphoid fever	4		3
Leprosy	1	1	9	Scarlet fever	10		3
Malaria [1]	61	1	19	Typhoid fever [1]	52	10	45

[1] Many of these cases from the interior

EGYPT

Plague—September 3–9, 1926.—During the week ended September 9, 1926, 12 cases of plague were reported in Egypt. The cases occurred in the district of Sidi Barani, in the western desert province.

Summary—January 1–September 9, 1926.—During the period from January 1 to September 9, 1926, 128 cases of plague were reported in Egypt, as compared with 111 cases reported for the corresponding period of the year 1925.

JAMAICA

Smallpox (alastrim)—Other communicable diseases—August 29–September 25, 1926.—During the period August 29 to September 25, 1926, 60 cases of smallpox (reported as alastrim) were reported in localities other than Kingston in the island of Jamaica. Other communicable diseases were reported as follows.

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chicken pox		2	Puerperal infection		1
Measles	2	13	Tuberculosis (pulmonary)	11	38
Ophthalmia neonatorum		2	Typhoid fever	13	112

MEXICO

Typhoid fever—Progreso—October 2, 1926.—During the week ended October 2, 1926, one death from typhoid fever was reported at Progreso, Mexico, with 40 cases reported present.

Water supply.—Progreso was stated to have no rainfall and no running water; also no wells of potable water, all wells being saline. The water supply is from cisterns. At the close of the summer season many of these cisterns are left locked by their owners and the water in them becomes stagnant.

SAMOA

Further relative to epidemic influenza—August, 1926.—Under date of August 21, 1926, epidemic influenza was reported present in a mild but highly infectious form at Apia, Samoa, and vicinity, with extension of infected area along the coast and an estimated number of 200 cases with no mortality.[1]

Later estimates place the number of reported cases at from 500 to 1,000, with an extension of infected area.

Influenza in American Samoa.—Further information shows the appearance of epidemic influenza in American Samoa, at first within a restricted area but later rapidly spreading. On August 19, 800 cases were reported present with one death from pneumonia (pneumococcus).

Measles.[1]—Measles was reported present in American Samoa, August 20, at two points. To August 18, 21 cases were reported present; in western Samoa, August 19, 14 cases.

[1] Public Health Reports, Oct. 1, 1926, p. 2171.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended October 22, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China:				
Canton	July 25-31	54	28	
Manchuria—				
Dairen	Aug 23-29	1	1	
Shanghai	Aug 29-Sept. 11	2	39	Cases, foreign, deaths, foreign and native in international settlements
India				
Calcutta	Aug 22-28	12	10	
Rangoon	do	2	1	
Philippine Islands				
Romblon Province	Mar 14-27	25	23	
Siam				Aug 22-28, 1926 Cases, 56, deaths, 29 total, Apr 1-Aug 28, cases, 7,522, deaths, 4,936
Bangkok	Aug 22-28	2		District

PLAGUE

Place	Date	Cases	Deaths	Remarks
Brazil:				
Paranagua	Oct 8			Present.
British East Africa				
Kenya—				
Kisumu	Aug 22-Sept. 11	2	2	
Uganda	June 1-30	318	252	
Egypt				Sept. 3-9, 1926. Cases, 12 Total, Jan. 1-Sept 9, 1926, cases, 128, corresponding period, 1925, cases, 111
Province—				
Sidi Barani	Sept. 3-9	12		In western desert
India				
Rangoon	Aug 22-28	3	2	
Siam				Apr 1-Aug 28, 1926 Cases, 15, deaths, 10
On vessel				
S S. Zaria				At Liverpool, England, Sept. 12, 1926; from Lagos, West Africa and ports, history of two fatal cases plague in native firemen, four plague rats found on arrival, Sept 18, 1926, of 70 rats caught and found dead on vessel, 29 rats found plague infected

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Brazil				
Bahia	Aug 22-Sept 11	11	11	
Pernambuco	Aug 22-28	27	3	
Rio de Janeiro	Sept. 5-18	407	238	Jan 1-Sept. 18, 1926 Cases, 3,101, deaths, 1,589
France				
Paris	Sept 11-20	19	5	
Great Britain:				
Newcastle-on-Tyne	Sept. 19-25	2		At Gateshead, across the Tyne from Newcastle, several cases reported
India.				
Calcutta	Aug. 22-28	4	4	
Iraq:				
Baghdad	do	1		
Basra	Aug 15-21	1		
Jamaica				Aug 29-Sept 25, 1926 Cases, 60 Reported as alastrim.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended October 22, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Java				
Surabaya	Aug 8-14	17		
Mexico				
San Luis Potosi	Sept 26-Oct 2		4	
Torreon	Sept 1-30		4	
Siam				Aug 22-28, 1926 Cases, 7, deaths, 4 Apr 1-Aug 28, 1926 Cases, 551, deaths, 213
Bangkok	Aug 22-28	7	2	
Sumatra				
Medan	do			One case varioloid
Union of South Africa				
Orange Free State	do			Outbreaks

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Chile				
Valparaiso	Sept 5-11	2		
China				
Antung	Aug 30-Sept 12	3		
Chosen				
Seoul	Aug 1-31	1		
Italy				
Palermo	Sept 12-18	1		
Norway				
Stavanger	Sept 6-12	1		

Reports Received from June 26 to October 15, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926 Cases, 31, deaths, 29
China				
Amoy	Aug 8-Sept 4	67		Stated to be present in epidemic form
Canton	June 1-30	38	14	
Foochow	Aug 15-Sept 4			Present
Nanking	July 25-Aug 7			Do.
Shanghai	Reported July 20	35	8	
Do	July 25-Aug 28	32	327	Cases, foreign, deaths, native and foreign.
Swatow	July 11-Sept 4	36	63	
Tsingtao	July 11-Aug 30	4	4	Japanese settlements, 10 deaths, Chinese, 30 to 40 deaths daily, estimated
Chosen:				
North Heian Province	Sept 3-16	70	30	Deaths estimated
Shingishu	Sept 13	19		Including places in vicinity
French Settlements in India				Mar 7-June 26, 1926 Cases, 31; deaths, 30
India				Apr 25-June 26, 1926, Cases, 18,526, deaths, 11,531. June 27-Aug 7, 1926 Cases, 11,492, deaths, 7,164
Bombay	May 30-June 5	1	1	
Do	July 18-31	2	2	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	60	
Do	June 27-Aug 21	242	215	
Madras	May 16-June 5	2	1	
Do	Aug 1-Sept 4	2	2	
Rangoon	May 9-June 26	67	44	
Do	June 27-Aug 8	28	27	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug 14	31	17	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 15, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
Japan				To Sept. 10, 1926. Cases, 35
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Wakayama	do	2		
Philippine Islands				
Manila	May 18-24	2	2	
Do	June 27-Aug 21	9	2	
Provinces—				
Albay	Apr 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb 21-Mar 6	3	3	
Pampanga	July 25-31	1	1	
Rizal	July 18-24	1		
Romblon	Dec 14-31	42	43	
Do	Jan. 2-23	16	12	
Siam				Aug 1-21, 1926 Cases, 130, deaths, 100.
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-Aug 7	77	28	
Straits Settlements				
Singapore	July 4-17	2	1	
On vessel				
Steamship Macedonia	Aug. 5	1		At Yokohama, Japan Vessel sailed from Singapore, July 18, 1926

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported
Do	July 1-20	1		
Bona	Aug 14	1		
Philippeville	Sept 7	1		
Azores				
Fayal Island—				
Horta	Aug 2-29	2	2	
St Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	
British East Africa				
Kisumu	May 16-22	1	1	
Do	Aug 17	1		
Uganda	Mar 1-May 31	414	322	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	
China				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug 7	28		
Foochow	June 6-July 31			Several cases Not epidemic
Nanking	May 9-Aug 7			Prevalent
Swatow	July 25-31	14		
Ecuador				January-June, 1926 Cases, 385, deaths, 154.
Chimborazo	January-June	9	2	Rats taken, 766
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31.
Do	July 1-Aug 31	12	3	Rats taken, 41,321; found infected, 59.
Leon	January-June	43	19	Localities, 2.
Loja	do	176	75	Cantons, 2
Tunguruhua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1542.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 15, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Egypt				Jan 1-Aug 12, 1926 Cases, 115.
City—				
Alexandria	Jan. 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkiah	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
France				
Marseille	July 8	1	1	Reported July 24
St Denis	Reported Aug 2	1		Vicinity of Paris
St Ouen	Aug 14	2		Suburb of Paris
Great Britain				
Liverpool	Aug 29-Sept 4	2	1	
Greece				
Athens	Apr 1-May 31	16	4	Including Piraeus
Do	Aug 1-31	9	2	Do
Patras	May 27-June 12	4	1	
Do	July 25-Sept 4	7	4	
Zante	May 17	1		
Hawaii				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Paauhau	July 18-24			Plague-infected rat trapped
India				Apr 25-June 16, 1926 Cases, [illegible], deaths, 41,576 June 27-Aug 7, 1926 Cases, 1,405, deaths, [illegible]
Bombay	May 2-June 26	16	15	
Do	July 18-Aug 14	4	4	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	162	93	
Do	July 1-Aug 14	264	139	
Rangoon	May 9-June 26	20	15	
Do	June 27-Aug 21	47	38	
Indo-China				
Saigon	May 23-June 26	8	3	
Do	July 18-Aug 7	2	1	
Iraq				
Baghdad	Apr 18-June 12	161	108	
Do	July 18-31	2	2	
Japan				
Yokohama	July 2-30	9	5	
Do	Aug 7	2		Total, July 2-Aug. 10, 1926: Cases, 9; deaths, 8
Java				
Batavia	Apr 24-June 19	65	65	
Do	June 26-Aug 20	44	42	
Cheribon	Apr 11-24	3	3	
East Java and Madura	June 13-19	1	1	
Do	July 25-31	1	1	
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Majunda Province	do	10	6	
Mananjary Province	do	1	1	
Moramanga Province	Apr 1-15	2	2	Do
Tananarive Province				Apr 1-June 30, 1926 Cases, 130; deaths, 120
Tamatave (Port)	May 16-31	1	1	
Tananarive Town	Apr 1-June 30	7	7	
Nigeria				Feb 1-Apr 30, 1926 Cases, 115; deaths, 92
Peru				May-June, 1926 Cases, 57, deaths, 16 July 1-Aug 31, 1926 Cases, 44, deaths, 16.
Departments—				
Ancash	May 1-31			Present
Do	July 1-31	2		
Cajamarca	May 1-June 30	10	4	
Do	Aug 1-31	1		
Ica	May 1-31	1		
Do	July 1-31	1		
Libertad	May 1-31	4		
Lima	May 1-June 30	29	12	
Do	July 1-Aug 30	40	16	
Piura	June 1-30	13		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 15, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Russia				Jan 1-Mar 31, 1926 Cases, 37
Senegal				Nov. 1-30, 1925 Cases, 3, deaths, 2 Mar 1-Apr. 30, 1926 Cases, 15, deaths, 4.
Siam				
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Do	July 4-17	1	1	
Syria				
Beirut	July 1-Aug 10	2		
Tunisia	May 11-June 30	174		
Do	July 1-20	12		
Kairouan	June 9	3		9 cases 50 miles south of Kairouan
Turkey.				
Constantinople	Aug 1-Sept 4	5	2	
Union of South Africa:				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug 21	4	3	
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District	Aug. 15-21	1		
Protestpan	May 9-22	3	3	
On vessel				
Steamship Zaria	September, 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa Four plague-infected rats found on board

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	14		
Do	July 1-Aug 31	3		
Belgium				
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-31	2	4	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Aug 21	32	25	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-Aug 14	18	11	
Pernambuco	July 11-Aug 2	43	7	
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 4	1,823	897	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Canada				May 30-June 12, 1926 Cases, 46.
Alberta	May 30-June 12	3		
Do	June 27-Sept 25	18		
Calgary	Sept 5-25	6		
British Columbia—				
Vancouver	Aug 16-Sept 12	3		
Manitoba				May 30-June 26, 1926 Cases, 24 June 27-Sept 25, 1926 Cases, 20
Winnipeg	June 6-12	5		
Do	July 4-Sept 4	12		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 15, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Canada—Continued				
Ontario				May 30-June 26, 1926 Cases, 30 June 27-Sept 25 Cases, 81
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2		
Kitchener	Apr. 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Peterboro	Sept 1-30	10		
Toronto	July 18-Aug 11	8		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16 June 27-Sept 18 Cases, 39
Regina	July 4-Sept 25	3		
Ceylon				Mar 14-May 29, 1926 Cases, 44, deaths, 3
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 1-18	2		
Canton	May 1-31	4	2	
Changsha	Aug 8-14	1		
Chungking	May 2-Aug 21			Present
Foochow	do			Do
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do.
Do	June 27-July 3	1		Do
Dairen	Apr 26-June 20	69	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do.
Harbin	May 14-June 30	21		Do
Do	July 1-28	14		
Kai-yuan	May 16-June 30	10		Do
Kungchuling	June 13-19	1		Do.
Liaoyang	May 16-June 30	4		Do.
Mukden	do	4		Do.
Penhsihu	May 16-June 19	4		Do.
Ssupingkai	May 16-June 30	2		Do.
Teshihchiao	do	2		Do.
Wa-feng-tien	do	3		Do.
Nanking	May 8-Aug 7			Present.
Shanghai	May 2-June 26	10	25	Cases, foreign. deaths, population of international concession, foreign and native.
Do	June 27-July 24	3	3	
Swatow	May 9-Aug 14			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent.
Chosen				Mar. 1-May 31, 1926. Cases, 548, deaths, 121.
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Aug 19	11	5	
Cairo	Jan 29-Apr. 1	16	4	
Esthonia				May 1-June 30, 1926. Cases, 3.
France				Mar. 1-June 30, 1926. Cases, 141.
Paris	Sept 1-10	2		
St Etienne	Apr. 18-June 15	7	3	
French Settlements in India	Mar 7-June 26	282	282	
Gold Coast	Mar 1-May 31	662	13	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 15, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Great Britain				
England and Wales				May 23-June 26, 1926 Cases, 933 June 27-Sept 18, 1926 Cases, 1,168
Bradford	May 23-29	1		
Do	Aug 29-Sept 4	1		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-17	1		
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Sept 11	3		
Greece				
Athens	July 1-31	71	6	Including Piræus
Saloniki	June 1-14		3	
Guatemala.				
Guatemala City	June 1-30		2	
India				Apr 25-June 26, 1926 Cases, 54,851, deaths, 14,771 June 27-Aug 7, 1926 Cases, 16,506, deaths, 5,150
Bombay	May 2-June 26	220	134	
Do	June 27-Aug 21	86	47	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-26	24	18	
Do	June 27-Aug 21	20	25	
Karachi	May 16-June 26	44	18	
Do	June 27-Aug 21	13	7	
Madras	May 16-June 26	7	4	
Do	June 27-Sept 4	41	14	
Rangoon	May 9-June 26	10	5	
Do	July 4-24	3		
Indo-China				
Saigon	May 9-June 26	2		
Iraq				
Baghdad	do	8	3	
Do	July 4-10	1	1	
Basra	Apr 18-June 22	34	25	
Italy				Mar 28-June 26, 1926 Cases, 34. June 27-July 10, 1926 Cases, 3.
Catania	Aug 9-15	2		
Rome	June 14-20	4		Entire consular district, including island of Sardinia
Jamaica				Apr 25-June 26, 1926 Cases, 201. (Reported as alastrim.)
Do				June 27-Aug 28, 1926 Cases, 178 (Reported as alastrim)
Japan				Apr 11-June 19, 1926 Cases, 641
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		
Java.				
Batavia	May 15-June 25	2		Province
Do	July 24-Aug 20	3		Do
East Java and Madura	Apr 11-July 3	100	6	
Do	July 4-Aug. 7	43	1	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Do	July 18-24	15	1	
Latvia				Apr 1-June 30, 1926 Cases, 5
Mexico				Feb 1-Apr 30, 1926 deaths, 982
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-Sept. 27		8	
Mexico City	May 16-June 5	3		Including municipalities in Federal district
Do	July 25-Aug 28	4		Do.
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan. 1-June 30			Present 100 miles from Chihuahua.
San Luis Potosi	June 13-26		7	
Do	July 4-Sept. 25		11	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Do	July 1-Aug 31		9	
Netherlands				
Amsterdam	July 18-24		9	
[illegible]				Feb 1-Apr 30, 1926 Cases, 404; deaths, 33

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 15, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Persia				
Teheran	Apr 21-June 22		[illegible]	
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May 1 1926: Cases, 12, deaths 1. June 27-July [illegible], 1926 Cases, 2 deaths 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Sept. 11	21	6	
Oporto	May 23-June 5	4		
Do	July 11-24	2		
Russia				Jan 1-Mar 31, 1926 Cases, 2,103
Siam				Aug 1-7, 1926 Cases, 12 deaths, 8
Do				Aug 15-21, 1926 Cases, 18, deaths, 4
Bangkok	May 2-June 12	23	20	
Do	July 4-Aug 7	43	29	
Spain				
Valencia	Aug 22-28	1		
Straits Settlements				
Singapore	Apr 25-May 1	1		
Do	July 11-17	1		
Switzerland				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tripolitania	Apr 1-30	11		
Tunisia				Apr 1-June 30, 1926 Cases, 17
Tunis	Aug 11-30	2		
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks
Do	Aug 15-21			Do
Idutya district	May 23-29			Do
Orange Free State	June 20-July 3			Do
Natal	May 30-June 5			Do.
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts.
Johannesburg	May 9-June 12	5		
Do	July 11-17	1		
Yugoslavia				Apr. 15-30, 1926 Cases, 2; deaths, 1
Zagreb	Aug 9-15	2		
On vessels				
S S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed. At Durban, Union of South Africa, June 16, 1926: One suspect case landed.
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Do	July 21-Aug 31	3		
Argentina				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Bulgaria				Mar 1-June 30, 1926. Cases, 87; deaths, 14
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Valparaiso	Apr 29-May 5		1	
Do	Aug 14-28	3		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 15, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
China				
Antung	June 14-27	7	1	
Do	June 28-Aug 29	26	1	
Canton	May 1-31	1		
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1-May 31, 1926 Cases, 887, deaths, 91
Chemulpo	May 1-June 30	38	2	
Do	July 1-31	7	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Do	July 1-31	7		
Czechoslovakia				Jan 1-June 30, 1926 Cases, 156, deaths, 6
Egypt				
Alexandria	July 16-Aug 19	3		
Cairo	Jan 29-Mar 4	74	17	
Do	July 23-Aug. 5	1		
Port Said	June 4-24	4	1	
Do	July 9-Aug 19	4	1	
Great Britain				
Scotland—				
Glasgow	July 30-Aug 21	9	1	
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerr County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-May 8, 1926 Cases, 3
Japan				Mar 28-May 29, 1926 Cases, 37
Latvia				May 1-June 30, 1926 Cases, 19
Lithuania				Mar 1-June 30, 1926 Cases, 199, deaths, 22
Mexico				Feb 1-Apr 30, 1926 Deaths, 110
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in federal district
Do	June 13-19	9		Do
Do	July 25-31	3		Do
Do	Aug 15-Sept 18	31		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-June 30, 1926 Cases, 426.
Palestine				Mar. 1-June 30, 1926 Cases, 14; deaths, 1. Aug 10-Sept 6, 1926: Cases, 3.
Gaza	July 6-12	1		
Haifa	July 13-Aug 30	5		
Halalal	Aug 17-23	1		
Jaffa district	June 15-28	5		
Majdal district	July 13-Aug 2	2		
Nazareth district	do	3		
Tiberias	Aug 3-9	1		
Yavniel	Aug 17-23	1		
Persia				
Teheran	May 23-June 22		1	
Peru				
Arequipa	Jan. 1-31		2	
Poland				Mar. 28-June 26, 1926 Cases, 1,272, deaths, 85 June 27-July 24, 1926 Cases, 147, deaths, 11
Rumania				Mar 1-May 31, 1926 Cases, 711, deaths, 69
Russia				Jan 1-Mar 31, 1926. Cases, 14,814
Tunisia				Apr 1-June 30, 1926 Cases, 110.
Tunis	June 11-30	3		
Turkey:				
Constantinople	June 16-22	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 15, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				Apr 1-May 31, 1926 Cases, 173, deaths, 19
Do				July 1-31, 1926 Cases, 90, deaths, 17
Cape Province				Apr 1-June 30, 1926 Cases, [illegible], deaths, 24, native July 1-31, 1926, Cases, 58, deaths, 17
Glengray district	June 27-July 3			Outbreaks
Grahamstown	do	1		
Natal				Apr 1-June 30, 1926 Cases, 28 July 1-31, 1926 Cases, 23, deaths, 2
Durban	July 25-Aug 7	9	1	
Orange Free State				Apr 1-June 30 1926, Cases, 24, deaths, 4 July 1-31 1926, Cases, 7
Transvaal				Apr 1-June 30 1926 Cases, 10, deaths, 5 July 1-31, 1926 Cases, 2 Aug 17-21, 1926 Outbreaks
Walkkerstroom district	June 20-26			Outbreaks
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases 48, deaths, 7 July 1-Aug 31, 1926 Cases, 3, deaths, 1
Zagreb	May 17-21		1	

YELLOW FEVER

Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr 1-May 31	6	3	

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TREASURY DEPARTMENT

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SPECIAL ARTICLES

A Study of Endemic Goiter and School Absenteeism

Governmental Activities Relating to Tuberculous Persons

WASHINGTON
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1926

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst. Surg. Gen C C PIERCE, *Chief of Division*

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PREVALENCE OF DISEASE

PUBLIC HEALTH REPORTS

VOL. 41 OCTOBER 29, 1926 NO. 44

ENDEMIC GOITER AND SCHOOL ABSENTEEISM

By ROBERT OLESEN, Surgeon, and NEIL E TAYLOR, Acting Assistant Surgeon, United States Public Health Service

INTRODUCTION

Many writers have asserted without qualification that endemic goiter as it is encountered in the United States exerts a distinctly deleterious influence upon the minds and bodies of children If this statement is true it should be possible to detect some of the injurious effects by various observations among school children Several investigations of this nature have been completed, the results being available in publications of the United States Public Health Service.[1]

Additional information concerning the probable relationship between thyroid status and certain physical conditions among children can undoubtedly be obtained by noting absenteeism in schools The amount and character of the time lost by children from school are the points on which the present study hinges. If children are adversely affected by enlarged thyroid glands the result may, in some tangible way, be reflected in the school attendance

Limitations of the present study.—The conclusions which may be drawn from the investigation herein detailed are manifestly limited. The prevalence of endemic thyroid enlargement in Cincinnati is comparatively moderate in character. The inclusion of a relatively small number of sixth-grade school children and also younger children in open-air classes for study purposes likewise limits the possible findings to a small group Therefore, the results of the present investigation should be regarded as specific rather than general. Furthermore, the results of the present suggestive inquiry in Cincinnati may differ radically from more intensive studies made in other sections having a high prevalence of simple goiter. Investigations of somewhat similar trend among larger numbers of older children in areas having a high incidence of simple goiter might materially alter the results of the study here presented.

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[1] Robert Olesen and Neil E Taylor Relationship of Endemic Goiter to Certain Potential Foci of Infection, Pub Health Rep, vol. 41, No 13, p 557, Mar 26, 1926 (Reprint No. 1069)

Robert Olesen and Mabel R Fernald. Endemic Goiter and Intelligence Pub Health Rep, vol 41, No 21, p 971, May 21, 1926 (Reprint No 1081)

Robert Olesen and Neil E Taylor Endemic Goiter and Physical Development

Purpose and scope of the investigation.—The present study was undertaken for the purpose of learning the differences, if any, in school attendance of children with and those without thyroid enlargement. Attendance records were kept of 479 white boys and 478 white girls in one grade, the sixth. These children, ranging in age from 9 to 16 years, attended nine schools located in different parts of the city. By this process of selection a cross section of economic status and environmental conditions was afforded. Eighty-three colored boys and 107 colored girls, most of whom were attending the sixth grade of two schools, were likewise observed. In order to ascertain and compare the relative frequency of respiratory affections in dissimilar groups, the attendance of 23 white boys and 18 colored boys, in addition to 35 white girls and 25 colored girls in open-air classes of the lower grades, was also noted. These children were between 7 and 13 years of age.

The individuals included in the present investigation represent new material, the observations not having previously been utilized in any of the studies made in Cincinnati. Needless to say such a study could not have been undertaken without the sympathetic and generous assistance of school principals, teachers, and nurses. The writers are, therefore, under many obligations to the local school and health authorities for helpful suggestions and practical aid in securing the requisite data.

Methods.—In pursuing the study of absenteeism among Cincinnati school children liberal use was made of the methods employed by Dr. Louise Taylor-Jones in an investigation made in Washington, D. C., during the 1923–24 school session.[2]

The object of the study was made known to the teachers and nurses by verbal and written explanation. Very little was said to the children themselves lest disturbing factors should be projected into the inquiry. The extent and cause of each individual absence was recorded by the teacher upon the return of the absentee. Thereupon the school nurse investigated the cause of the absence and insured its approximate accuracy. Once a week the separate records were checked by the writers and the data transferred to individual cards, one of which, containing all data for the entire school year, was available for each pupil. The records were secured from December 1, 1924, to June 19, 1925, the close of the school year.

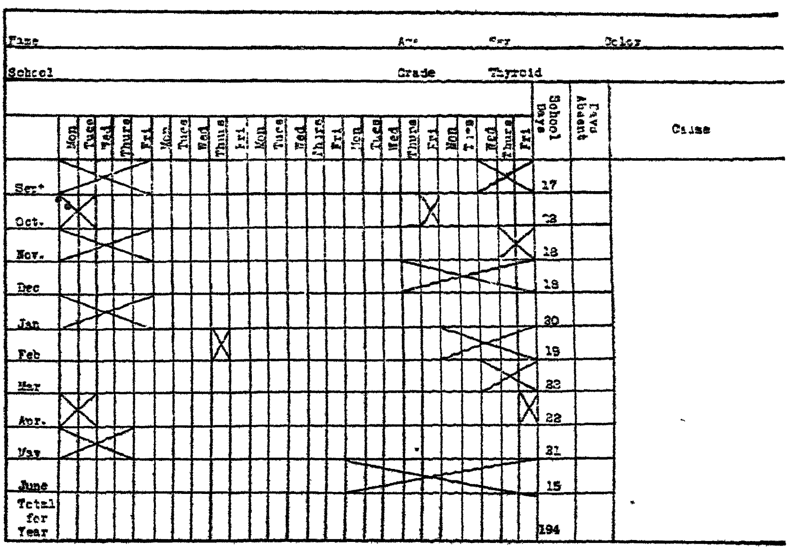
In the main the classification of causes of absence suggested by Doctor Taylor-Jones was followed in the present study. The several headings under which causes of absence were recorded are as follows:

1. Influenza and common colds.
2. Illnesses other than colds.

[2] Louise Taylor-Jones: Causes of Absence in One Grade of 15 Public Schools in Washington, D. C. Pub. Health Rep., vol. 39, No. 37, Sept. 12, 1924. (Reprint No. 954.)

3. Quarantine because of personal illness or illness of other members of family.
4. Bad weather.
5. Truancy
6. Religious holidays.
7. Miscellaneous causes, principally of a preventable character.

In recording the duration and causes of absence a revised form, based upon the original described by Doctor Taylor-Jones, was utilized. By omitting Saturdays and Sundays waste space was decreased. In brief, the form used in Cincinnati made use of the shorter school calendar instead of the regular calendar. The revised record sheet is shown as Form 1



FORM 1.—United States Public Health Service thyroid-absenteeism study

RESULTS

While the present study had for its primary object the determination of the amount and cause of absence among thyroid-normal and thyroid-enlarged children, certain interesting collateral information likewise became available. Many points of interest to health officials and school authorities are contained in the data secured, but only the more pertinent information relating to thyroid status has been included in the present paper.

Thyroid enlargement.—The numbers of each degree of thyroid enlargement found among the sixth-grade children are shown in Table 1. Thyroid enlargements were present among 55.5 per cent of the white girls and 65.4 per cent of the colored girls examined. Forty-two and nine-tenths per cent of the white boys and 50.6 per cent of the colored boys also had thyroid enlargement. The percentages of

thyroid enlargements among the children of the open-air classes, shown in Table 2, were lower, the individuals of this group being younger.

TABLE 1.—*Numbers of each degree of thyroid enlargement (by age, sex, and color) among 1,167 children in the sixth grade of the Cincinnati public schools during the 1924–25 session*

Age	White boys					White girls						
	Normal	Degree of enlargement			Total	Normal	Degree of enlargement					Total
		Very slight	Slight	Moderate			Very slight	Slight	Moderate	Marked	Very marked	
9								1				1
10	15	6			21	10	8	1	1			20
11	85	65	7		157	94	71	25	8			199
12	79	49	10		138	64	50	18	9		1	142
13	51	33	13		97	27	17	8	6			58
14	28	13	5	1	47	15	18	9	1	3		46
15	13	3			16	3	3	1	3		1	11
16	3				3				1			1
Total	274	169	35	1	479	213	167	64	29	3	2	478
Per cent	57.1	35.3	7.3	0.2		44.5	34.8	13.4	6.1	0.6	0.5	

Age	Colored boys				Colored girls					
	Normal	Degree of enlargement		Total	Normal	Degree of enlargement				Total
		Very slight	Slight			Very slight	Slight	Moderate	Marked	
10	1	2	1	4		1				1
11	2	7		9	4	5	4	1	1	15
12	9	4		13	9	4	4	3		20
13	4	12		16	7	5	6	1	2	21
14	14	8	2	24	13	11	4	3		31
15	9	3	1	13	2	7	1	2		12
16	2	2		4	2	4	1			7
Total	41	38	4	83	37	37	20	10	3	107
Per cent	49.4	45.8	4.8		34.6	34.6	18.7	9.3	2.8	

TABLE 2.—*Numbers of each degree of thyroid enlargement (by sex and color) among 101 children in the open-air classes of the Cincinnati public schools during the 1924–25 session*

	White boys				White girls				
	Normal	Degree of enlargement		Total	Normal	Degree of enlargement			Total
		Very slight	Slight			Very slight	Slight	Moderate	
Total	13	8	2	23	17	12	4	2	35
Per cent	56.5	34.8	8.7	100.0	48.6	34.3	11.4	5.7	100.0
	Colored boys				Colored girls				
Total	13	5		18	14	10	1		25
Per cent	72.2	27.8		100.0	56.0	40.0	4.0		100.0

Total and average time losses.—The total number of days lost from school by the white boys and girls attending the sixth grade and the general causes of the absence are shown in Table 3. Similar information for the colored children is available in Table 4. It will be noted that 2,953 days were missed by the 479 white boys and 3,253 days by the 478 white girls There was an average loss of 6.1 days among the boys and 6 8 days among the girls. The average absenteeism among the colored children was much higher, being 11.8 days for the colored boys and 10 3 days for the colored girls. Considering that the records do not cover the entire school year, the average absence chargeable to each pupil is considerable

TABLE 3.—*Total and average number of days of absence from school during the 1924–25 session among 479 white boys and 478 white girls in the sixth grade of the Cincinnati public schools, according to cause of absence, and presence or absence of thyroid enlargement*

WHITE BOYS

Thyroid status	Number of boys	Total days of absence by causes of absence[1] (1)	(2)	(3)	(4)	(5)	(6)	(7)	Total days lost
Total	479	427	1,645	183	5	24 5	127	541 5	2,953
Normal	274	259 5	967 5	70 5	3 5	17	85	310	1,711
Enlarged	205	167 5	675 5	112 5	1 5	7 5	42	231 5	1,242
		Average absence in days							
Total	479	0 89	3 4	0 38	0 010	0 050	0 26	1 13	6 1
Normal	274	95	3 5	25	012	062	31	1 13	6 2
Enlarged	205	81	3 3	54	007	036	20	1 13	6 0

WHITE GIRLS

Thyroid status	Number of girls	Total days of absence by cause of absence[1] (1)	(2)	(3)	(4)	(5)	(6)	(7)	Total days lost
Total	478	512.5	1,612	479	8	2.5	116 5	522 5	3,253
Normal	213	248 5	758	173	3 5	2.5	39 5	246.5	1,471 5
Enlarged	265	264	854	306	4.5	--------	77	276	1,781.5
		Average absence in days							
Total	478	1 08	3 4	1 01	0 017	0 005	0 24	1.09	6 8
Normal	213	1 16	3 6	8	016	011	18	1 15	6.9
Enlarged	265	99	3 2	1 16	.017	-------	29	1.04	6.7

[1] Explanation (1) Influenza and colds (2) Sicknesses other than colds (3) Quarantine or illness in other members of family (4) Bad weather (5) Truancy (6) Religious holidays (7) Miscellaneous causes (other than illness)

TABLE 4.—*Total and average number of days of absence from school, during the 1924–25 session among 83 colored boys and 107 colored girls in the sixth grade of the Cincinnati public schools, according to cause of absence, and presence or absence of thyroid enlargement*

COLORED BOYS

Thyroid status	Number of boys	Total days of absence, by causes of absence (1)	(2)	(3)	(4)	(5)	(6)	(7)	Total days lost
Total	83	140	318.5	63	--------	87.5	9	334.5	982.5
Normal	41	[illegible]	175	27	--------	60.5	8	184.5	518
Enlarged	42	77	143.5	66	--------	27	1	150	464.5
		Average absence, in days							
Total	83	1.7	3.8	1.12	--------	1.05	0.108	4.02	11.8
Normal	41	1.5	4.3	.65	--------	1.5	.019	4.5	12.6
Enlarged	42	1.8	3.4	1.5	--------	.64	.024	3.6	11.01

COLORED GIRLS

Thyroid status	Number of girls	Total days of absence, by causes of absence (1)	(2)	(3)	(4)	(5)	(6)	(7)	Total days lost
Total	107	126	393	178	6	11	1	395	1,110
Normal	37	36.5	148	55.5	1	10	--------	154	405
Enlarged	70	89.5	245	122.5	5	1	1	241	705
		Average absence, in days							
Total	107	1.18	3.6	1.6	0.056	0.103	0.009	3.7	10.3
Normal	37	.99	4	1.5	.027	.27	--------	4.1	10.9
Enlarged	70	1.2	3.5	1.7	.071	.014	.014	3.1	10.07

Absence in relation to thyroid status.—Coming to a consideration of the differences in absenteeism between thyroid-normal and thyroid-enlarged children it is apparent that less time was lost by those of the latter group. The differences, however, are neither marked nor significant. Average absences from specific causes were, with few exceptions, slightly less among the thyroid-enlarged children. The similarity in the types and durations of absences from various causes is shown in Chart 1. In preparing the graphic representations presented in this chart, the losses from common colds, other sicknesses, and quarantine because of personal illness or illness of other members of family, have been combined. An examination of Chart 1 shows that the average monthly loss of time from school was slightly less among the children who had no enlargement of the thyroid gland. Absence from school on account of causes associated with illness was most marked during the month of March and was more conspicuous among the girls.

Combined time losses from bad weather, truancy, and religious holidays were about equally distributed between the thyroid-enlarged and thyroid-normal individuals, the distribution being irregular and indistinct.

The miscellaneous causes of school absence, largely avoidable in character, show similar trends, which reach their maxima in April. The differences in school absence between those with and those without thyroid involvement are not clearly marked and therefore lack significance

Absence because of common colds was slightly more frequent among the girls. Loss of school time because of personal quarantine or the illness of other members of the family was slightly more frequent among the thyroid-normal children, both white and colored. Truancy appears to be a relatively unimportant cause of absence

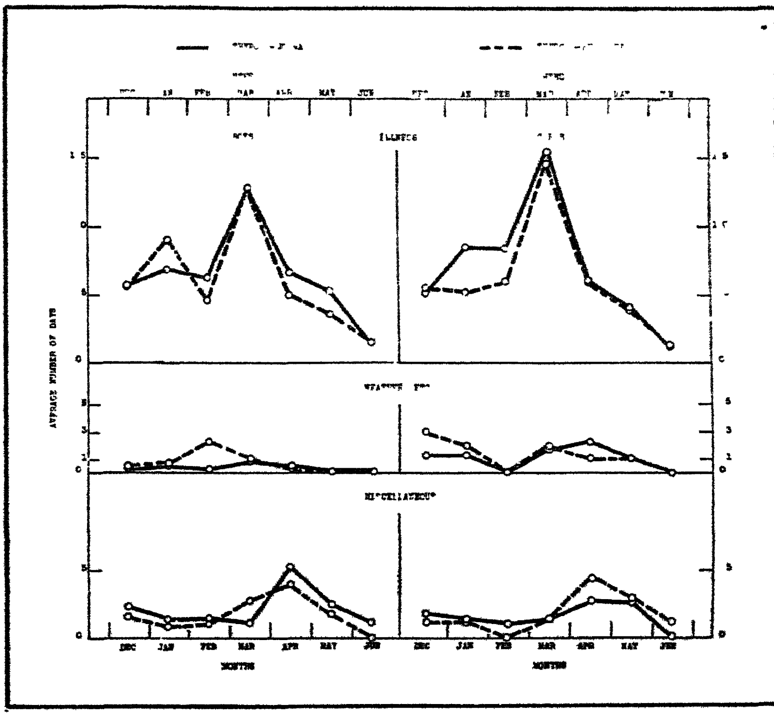


CHART 1 —Average number of days lost from school on account of illness, bad weather, and miscellaneous causes by thyroid-normal and thyroid-enlarged boys and girls in Cincinnati

among the children observed, though more frequent among the colored children than among the white and among both the white and colored boys than among the girls.

Records from open-air classes.—The records of absence among those attending open-air classes are open to the just criticism that relatively few observations are available, and these among younger children. Despite this obvious deficiency it is apparent, after examining Tables 5 and 6, that there are numerous points of comparative interest. Foremost in interest is the fact that the total average absence in the open-air classes exceeds the days lost by

children in the regular classes Furthermore, except among the colored boys, average absence from common colds is greater among the children of the open-air classes.

TABLE 5—*Total and average number of days of absence from school, during the 1924–25 session, among 23 white boys and 35 white girls in the open-air classes of the Cincinnati public schools, according to cause of absence, and presence or absence of thyroid enlargement*

WHITE BOYS

Thyroid status	Number of boys	Total days of absence, by causes of absence							Total days lost
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Total	23	37	123	29	--------	1	2	94.5	286.5
Normal	13	25	76.5	2.5	--------	1	1	51.5	157.5
Enlarged	10	12	46.5	26.5	--------	--------	1	43	129
		Average absence, in days							
Total	23	1.6	5.3	1.2	--------	0.043	0.087	4.1	12.4
Normal	13	1.9	5.9	.19	--------	.077	.077	3.9	12.1
Enlarged	10	1.2	4.6	2.6	--------	--------	.10	4.3	12.9

WHITE GIRLS

Thyroid status	Number of girls	Total days of absence, by causes of absence							Total days lost
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Total	35	83.5	226	21.5	3	--------	--------	73	407
Normal	17	48.5	113	19.5	1	--------	--------	35	217
Enlarged	18	35	113	2	2	--------	--------	38	190
		Average absence, in days							
Total	35	2.4	6.4	0.61	0.08	--------	--------	2.09	11.4
Normal	17	2.8	6.6	1.1	.05	--------	--------	2.06	12.7
Enlarged	18	1.9	6.3	.11	.11	--------	--------	2.1	10.6

TABLE 6—*Total and average number of days of absence from school during the 1924–25 session, among 18 colored boys and 25 colored girls in the open-air classes of the Cincinnati public schools, according to cause of absence, and presence or absence of thyroid enlargement*

COLORED BOYS

Thyroid status	Number of boys	Total days of absence by causes of absence							Total days lost
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Total	18	13	51	24	3	28	--------	32.5	151.5
Normal	13	6	37	23	3	26	--------	16.5	110.5
Enlarged	5	7	14	2	--------	2	--------	16	41
		Average absence, in days							
Total	18	0.72	2.8	1.3	0.16	1.5	--------	1.8	8.4
Normal	13	.46	2.8	1.7	.23	2	--------	1.3	8.5
Enlarged	5	1.4	2.8	.4	--------	.4	--------	3.2	8.2

TABLE 6.—*Total and average number of days of absence from school during the 1924–25 session, among 18 colored boys and 25 colored girls in the open-air classes of the Cincinnati public schools, according to cause of absence, and presence or absence of thyroid enlargement*—Continued

COLORED GIRLS

Thyroid status	Number of girls	Total days of absence by causes of absence							Total days lost
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Total	25	108	132	58	10	5	------	104	417
Normal	14	47	78	14	8	5	------	[illegible]	207
Enlarged	11	61	54	44	2	------	------	[illegible]	210
		Average absence, in days							
Total	25	4.3	5.3	2.3	0.4	0.2	------	4.2	16.7
Normal	14	3.3	5.6	1	.57	.36	------	3.9	14.8
Enlarged	11	5.5	4.9	4	.18	------	------	4.5	19.1

Further study of Tables 5 and 6 shows that a greater average number of days was lost by the thyroid-enlarged white boys and colored girls than by those with normal thyroids. Among the white girls and colored boys the average losses from absenteeism were greater among the thyroid-normal individuals. In all probability the number of observations available among the children of the open-air classes was too small to permit of drawing conclusions relative to the influence of thyroid condition.

SUMMARY

1. An investigation was undertaken in Cincinnati for the purpose of learning the character and extent of absence from school among thyroid-normal and thyroid-enlarged children.

2. Records were kept of absences among 479 white and 83 colored boys and 478 white and 107 colored girls in the sixth grade of 11 schools. In addition, 23 white and 18 colored boys and 35 white and colored girls attending open-air classes were also studied.

3. Thyroid enlargements were present among 55.5 per cent of the white girls and 65.4 of the colored girls examined. Forty-two and nine-tenths per cent of the white boys and 50.6 per cent of the colored boys had thyroid enlargement. Lower percentages of thyroid involvements were found among the children attending the open-air classes, who were younger.

4. Average absences from school were much greater among the colored than among the white children. Among the white children the average absences were slightly greater among the girls. The opposite condition held among the colored children.

5. A comparison of thyroid-normal and thyroid-enlarged children shows, in the particular group under consideration, a slightly greater average absence in the former group. Common colds caused a slightly greater average loss of time from school among the girls.

6 The average time loss of pupils in the open-air classes exceeded the average absence of those attending the regular classes Except among the colored boys, the average absence because of common colds was greater among those attending the open-air classes Absenteeism among the thyroid-normal and thyroid-enlarged children in the open-air classes was irregular in character and without significance, probably because of the small numbers, the lower ages, and relatively small amount of thyroid involvement

DISCUSSION

The observations which have been made in the present article apply, of course, to a limited group in a single community. Whether the extension of a similar study to a large group of older children would alter the findings is problematical Certainly it would be essential, before concluding that thyroid enlargement exerts no influence upon school attendance, to conduct investigations in other parts of the country, particularly in districts of relatively higher goiter incidence.

As a means of contributing to the knowledge concerning the ill effects of endemic goiter, a record of school attendance holds forth considerable promise. In the investigation described in the present paper it has been demonstrated that the average school attendance, at least in a selected group, was slightly, though not significantly, better among the individuals with some degree of enlargement of the thyroid gland It follows, therefore, that the various mental and physical ailments from which children with endemic goiter are alleged to suffer, were not measurably reflected in the school attendance of the particular group under observation.

WHAT THE GOVERNMENT IS DOING FOR TUBERCULOUS PERSONS[1]

By Lucy Minnigerode, Superintendent of Nurses, United States Public Health Service

The subject "What the Government is doing for tuberculous persons" touches some interesting phases of Government work

Many persons are no doubt familiar with the fact that there are several departments and bureaus of the Government engaged in medical work either directly or indirectly. Following are the most important of these branches of the Federal Government directly concerned with medical activities: The Army; the Navy, the Veterans' Bureau; the Public Health Service; the Children's Bureau, of the Department of Labor, which administers the Sheppard-Towner Act; the Office of Indian Affairs, of the Interior Department, which

[1] Read at the Seventh Annual Camp of Instruction, held under the auspices of the Pennsylvania State Department of Health, at Mont Alto Sanatorium June 22, 1926

is responsible for the medical care and treatment of the Indians on Government reservations, the Bureau of Education, of the same department, which is charged with providing medical relief for the natives of Alaska; the Bureau of Animal Industry and the Bureau of Home Economics, of the Department of Agriculture, and the United States Employees' Compensation Commission.

The material presented here relating to the various departments has been secured in each instance from the department concerned in order to insure accuracy. In requesting statements from these various Federal departments and offices, those which were not dealing directly with tuberculosis were not included.

Medical Department of the Army

1 PREVENTION

Under "prevention" are included annual physical examinations of officers and nurses, improvement of housing and personal hygiene, the proper and efficient treatment of respiratory and contagious diseases, thus preventing recrudescence of quiescent lesions, establishment of a special department of nutrition under an expert physiologist, compulsory courses for internes and general medical officers at Fitzsimons General Hospital (the tuberculosis hospital of the Army), courses for nurses, including affiliating student nurses from Denver hospitals, at the Fitzsimons General Hospital, and the employment of a public health nurse, a member of the Army Nurse Corps, at one large Army camp, Fort Benning, Ga., whose visiting nurse-activities include examination of school children of the post and all forms of child welfare.

Most tuberculosis in the Army comes in from civil life. The amount found depends upon the efficiency of physical examinations—on admission and afterwards During recruiting for the war, local examining boards culled out 69,935 cases of tuberculosis, including suspected cases, out of a total of approximately 3,700,000 men. In addition to this number, Army camp boards turned back approximately 15,000 men. During the war 22,812 men, including volunteers as well as selected service men, were discharged on account of tuberculosis

The Army had an especially organized tuberculosis service with a branch in each camp during the war. The duty of the officers in these services was to eliminate and treat cases of tuberculosis. Through this service comparatively few cases of tuberculosis got into the Expeditionary Forces. For example, the case rate of tuberculosis in the Army in the United States during the war was 13.15 per thousand per annum, and in the American Expeditionary Forces was 4.29, which shows that practically three times as many tuberculosis cases were found and eliminated in the camps of the United States as were in the American Expeditionary Forces.

2. TREATMENT DURING THE WAR

The Army conducted four large hospitals for tuberculosis, located at the following-named places: Oteen, N C, Fort Bayard, N. Mex., Whipple Barracks, Ariz, and Denver, Colo. These hospitals cared for 38,607 patients, of whom 2,766 died. Many of these patients continued their treatment in the Veterans' Bureau and other hospitals At the present time the Army has one hospital for tuberculosis, Fitzsimons, a large general hospital at Denver, Colo. Its normal capacity is 1,847 beds. During the past year it has had 4,000 admissions, approximately all for tuberculosis or suspected tuberculosis All military sick of this class are sent to Fitzsimons Hospital, where the latest methods in the care of tuberculosis are employed Excellent results have been accomplished by heliotherapy and surgery. The Army also cares for certain tuberculosis patients of the Veterans' Bureau at the Army hospitals at El Paso and San Antonio, Tex.

The Public Health Service

The Public Health Service publishes weekly reports showing the prevalence of disease, including tuberculosis. It also publishes popular and technical articles dealing with health and sanitation. I have here a number of pamphlets on tuberculosis which are available upon request from the Public Health Service. Studies dealing either directly or indirectly with the problems of tuberculosis are constantly being made. Among the publications is the report of an investigation concerning tuberculosis in Porto Rico made by Doctor Townsend, of the Public Health Service, and published in 1923. There is being conducted at the present time a study of the distribution and prevalence of all respiratory diseases, which was begun about three years ago. Student groups in 13 of the leading universities of the United States were selected for this investigation, as well as families of medical officers of the Army, Navy, and Public Health Service, and faculty members of the above-mentioned universities. Selection of universities was made so as to include different areas of the United States. Final results of this investigation have not yet been published, but, when the study is completed, we shall no doubt have some new valuable information on the subject. There are also being conducted extensive studies on the effect of sunlight on health and disease. Some of the results of these studies will be published in connection with the report on the prevalence of respiratory diseases. It is believed that these studies will have a bearing on the whole problem of tuberculosis. Statistics of all kinds are available through the morbidity studies conducted by the Public Health Service.

The Public Health Service has been conducting several studies on the relation of dust to the health of industrial workers. One of the

principal objects of these studies is to determine as accurately as possible whether or not a specific dust hazard has any effect as a predisposing cause of reactivation of tubercle. The particular dusts included are those prevailing in cement, silver polishing, anthracite, bituminous and granite industries, as well as certain industries in which organic dusts prevail The studies themselves are extremely intensive in character, involving a careful history of each individual observed, a physical examination, X ray of all suspicious cases, at least two years of continuous observation with regard to respiratory as well as other illnesses, and a thorough study of the occupations from the point of view of the dust hazard, its severity as well as the chemical composition of the dust

As a part of the statistical research work, statistics of tuberculosis prevalence are being collected gradually for different groups of individuals, including industrial employees, children of school age, and general population groups, living and working under different conditions. The purpose of this collection of data is to obtain a sufficient amount of dependable information on the incidence of tuberculosis and the conditions under which the disease is most prevalent. In addition to the morbidity statistics, a study has been in progress for some time on certain phases of mortality from tuberculosis, with the particular purpose of trying to discover some of the general conditions which appear to be related to the wide differences in mortality from the disease in different localities, geographic areas, race stock, varying industrial conditions, etc.

Since 1906, under an Executive order, the Public Health Service has made physical examinations of persons employed by the Government who are believed to have tuberculosis (or other communicable diseases), making a true report to the official concerned. You will note that this order originated at a time when more importance was placed upon the possibility of infection of adults from fellow employees than now. It operates now to assist in the early diagnosis of tuberculosis.

Officers of the Public Health Service make physical examinations of civil service applicants and employees. Approximately 19,000 such examinations are made annually. Tuberculosis or conditions predisposing thereto are sometimes detected.

The service operates a hospital for the care of tuberculous merchant seamen and other beneficiaries at Fort Stanton, N. Mex., where approximately 230 patients are constantly under treatment.

Patients are not sent to Fort Stanton except after careful scrutiny of the clinical histories in order to prevent unwise transfers. (See Hospital Division Circular No. 218, of July 12, 1922.) It is, however, I think, creditable to the Public Health Service that of the large number of tuberculous patients transferred to Fort Stanton, 1,228

have died there since 1898. This speaks very well for the place, since it is able to persuade men who, of course, could leave the place at their discretion, to remain there until they die, thus preventing the infection of others, particularly young children, with whom they might come in contact in sailors' boarding houses or in their own homes

However, it is not only at Fort Stanton that tuberculous patients are cared for Every hospital in the Public Health Service has beds available for the care of the tuberculosis patient. This is a definite policy of the service, which, for a number of years, has strongly advocated the inclusion of wards for tuberculous persons in all civilian, municipal, or Government hospitals The advisability of tuberculosis wards in general hospitals is preached by the Public Health Service whenever opportunity is presented, and I take pleasure in again urging that every effort be made toward the accomplishment of this purpose by all agencies interested in the care of the tuberculous patient.

United States Veterans' Bureau

The United States Veterans' Bureau has 18 hospitals caring for over 5,000 tuberculous patients who are beneficiaries of the Veterans' Bureau. In addition to this, in 52 regional offices there are nurses on duty caring for beneficiaries under the direction of medical officers, the purpose being to educate as well as care for these patients The latest consolidated report of these activities shows 16,434 tuberculosis cases under supervision in these 52 regional offices Each nurse has a given territory assigned to her and is responsible for the supervision of all beneficiaries, and provision for their needs, in that area Beneficiaries with a diagnosis of tuberculosis are visited as often as it is deemed necessary by the medical officer in charge of the case. Instruction is given regarding daily rest hour, care of dishes and linen, disposal of sputum, the caution necessary to protect others from infection, especially children, recreation, exercise, etc

Before a beneficiary is discharged from one of the hospitals a formal notice is sent to the regional office requesting an investigation of the home conditions. The nurse is directed to make investigation, and she forwards her report through proper channels to the hospital requesting the information After the report is made to the medical officer in charge of the hospital, and provided the home conditions are approved, the beneficiary is allowed to take home treatment under supervision Following his return to his home, the nurse takes up the supervision of the case and the claimant then reports, if able to do so, to the clinic for the purpose of treatment and periodical reexamination. If home conditions are not suitable, they are disapproved and the family is instructed as to the changes which may be necessary.

Since 1923 an intensive program of supervision and education has been outlined in many of the regional offices to be carried on with tuberculous beneficiaries. The idea of this group instruction is for the purpose of bringing patient and physician in closer touch, so that the nurse might have the support that could come only from the fact that there is a physician in charge of the case The following requirements for entrance into these classes of instruction were established:

1 Patient is required to have at least one year of hospital treatment with instruction in regard to his own case while in the hospital

2 Home conditions must meet the requirements of the United States Veterans' Bureau

3 The patient must promise to cooperate fully with the doctor and the nurse.

4 Out-patient treatment must have been authorized, hospitalization not recommended, and the patient is such as the examining specialist feels would benefit by this instruction

For instance, the patient who had not had sufficient hospitalization to be admitted into the class was urged to accept further hospital treatment. Those patients whose homes did not meet the requirements of the regulations of the Veterans' Bureau were encouraged to move into more suitable quarters

A comprehensive course of instruction is given to patients during their period of hospitalization Upon admission to the hospital the patient is instructed as to the importance of following faithfully all rules and regulations He is made to understand that such rules are made to insure his proper treatment and speedy recovery and are not merely matters of discipline This teaching, initiated in the receiving ward, is followed up by the ward surgeon, who, in addition, explains to the patient in lay language enough of the pathology of his case to secure his cooperation in treatment. A personal interest is shown in the welfare of the individual patient and confidence is established between him and the physician. Upon discharge from the hospital, the patient is acquainted with his limitations as regards work, exercise, etc.

All tuberculosis hospitals of the Veterans' Bureau have instituted courses of instructions for the nurses on duty In many instances in which the hospital and regional office are located in the same city, arrangements have been made for the nurses to attend the staff meetings and courses of study in the hospital Several offices have adopted a plan whereby a specialist in tuberculosis devotes a short period of time, preferably at the beginning of the day, to instruction in proper procedure relative to follow-up nursing of beneficiaries and their families.

Postgraduate courses, or rather courses of intensive instruction, in tuberculosis for both physicians and nurses have been held in United States Veterans' Hospital No. 60, Oteen, N. C , and in United States

Veterans' Hospital No. 41, New Haven, Conn. Acknowledged leaders in tuberculosis work participated. These courses have attained a degree of success not equaled in this country.

In some of the hospitals, model wards have been established and every effort is made to accomplish the essential purpose of hospitalization, and the information the patient receives in intramural surroundings helps to keep him from having a recurrence of his trouble It also assists him in teaching his family to live correctly after he goes home

A bulletin on tuberculosis nursing for the guidance of nurses has also been prepared in the Nursing Service of the Veterans' Bureau. This bulletin, known as General Order No 343, outlines the function of the follow-up nurses in the Veterans' Bureau in their visits to bureau beneficiaries who are not receiving treatment in hospitals and who are actually in need of follow-up nursing care

From the report of these activities it will be seen that two or possibly three activities in regard to tuberculosis are being carried on by the Veterans' Bureau. The first of these is treatment of actual cases of tuberculosis in hospitals established for that purpose The second is the follow-up of tuberculous patients who have become inactive and allowed to return to their homes, and keeping under supervision all these patients so that they may not become again reactivated The third is the educational and preventive work, which is by far the most important in its bearing upon the whole tuberculosis problem throughout the country A tremendous amount of work is being done in the Veterans' Bureau toward the education of the patient in regard to the infectiousness of his disease, the menace which he may be to members of his family through carelessness, impressing upon him particularly that he may be a menace to his children. His family is instructed in the measures which are necessary for keeping the patient well and for preventing conveyance of the infection to others.

Physicians and nurses are trained through these educational activities in the proper care of tuberculous patients At the close of the war, when the ex-service men were being discharged by the thousands, it was almost impossible to secure either physicians or nurses adequately trained in the proper care of tuberculous patients. It was for this reason that the Public Health Service instituted the first school in tuberculosis treatment, which was held at Oteen, N. C., mention of which has already been made. The Veterans' Bureau, realizing the value of this school, has continued to "carry on" and has developed an educational program in the care of tuberculous patients which can not fail to be of great benefit to the country at large by increasing the number of medical personnel trained in the care of tuberculosis.

Office of Indian Affairs

For the purpose of treating tuberculous patients, there are maintained in the Indian Service six sanatoria schools, with a combined capacity of 464 beds, and six sanatoria hospitals, with a bed capacity of 124 In addition to these a number of the general hospitals have facilities for accommodating a limited number of Indians afflicted with tuberculosis

The tuberculosis sanatoria are intended for the care and treatment of Indians where the process is so active and advanced that the chances of permanent arrest are remote

The sanatoria schools are operated for the purpose of treating incipient cases of tuberculosis among children of school age, and a modified course of education is provided for the patients in addition to their treatment for tuberculosis As a rule, open-air schoolrooms are provided for these institutions

Besides those for whom institutional treatment has been provided, a large number of tuberculous patients are being treated daily in their homes by agency physicians, assisted by the field nurses and field matrons This class of patients is increasing rapidly as the Indian is fast becoming aware of the fact that his medicine man has nothing to offer that is effective in the treatment of tuberculosis, and his own observations are beginning to reveal to his mind that there are advantages to be gained by pursuing the white doctor's course, looking toward the eradication of the worst enemy to his health

The capacity of the institutions for the care of tuberculous patients is not nearly sufficient to take care of those who are now making application for this class of treatment.

Employees' Compensation Commission

Ever since its inception the Employees' Compensation Commission has held that pulmonary tuberculosis may, under certain conditions, be considered an occupational disease This consideration is entirely apart from the occurrence of tuberculosis following accidental injuries, and is a field in which most State and foreign compensation commissions have made little progress so far. As pulmonary tuberculosis is such a common disease, it has been necessary for the commission to differentiate between the ordinary cases of sickness and those which may fairly be ascribed directly to occupation. While the latter class of cases is comparatively rare, the commission has always felt that in equity a case of clearly occupational tuberculosis should receive the benefits of the compensation act. The experience of the commission, however, has demonstrated clearly that such claims should not receive favorable consideration

until a careful investigation and survey have been made by an especially trained investigator The consensus of medical opinion now is that contact is a relatively unimportant consideration in the etiology of adult tuberculosis On the other hand, occupations showing special hardships which would materially decrease the resistance of the individual, thus allowing the activation of a latent tuberculous process, by reason of extreme overwork, unusual climatic exposure, or various occupational hazards, such as dust, form the basis for the allowance of such cases as can be given favorable consideration.

Bureau of Animal Industry

The Bureau of Animal Industry is active in developing accredited herds—that is, tuberculosis-free herds—and in general eradication of tuberculosis among cattle

SANITATION OF TOURIST CAMPS

With the phenomenal increase in the number of passenger automobiles throughout the United States, and the increasing tendency for families to take long trips during vacation times, thousands of tourist camps have been established for the accommodation of many of these tourists who do not stop at hotels A new sanitary problem has thus arisen, and many States have already adopted regulations for the sanitary control of these camps.

In a recent report to the State board of health, the State supervisor of tourist camps and swimming pools of Texas states that during the summer months he inspected 225 camps and 27 swimming pools in 78 different counties of the State, and also 15 private camps and camps used by organizations. Approval was given only to those camps complying with the regulations of the State board of health, which are, constant and adequate supervision by a full-time caretaker, a safe and protected water supply, approved method of sewage disposal, and a safe and adequate method of garbage disposal.

The report also states:

"A noticeable feature is the diminution of free tourist camps in the State. Most municipalities have awakened to the fact that the free camp attracts elements not wanted, and the number of these camps is gradually decreasing. However, the number of private tourist camps operated for profit is rapidly increasing These camps have for rent furnished cottages equipped with modern conveniences In nearly every instance camps of this character are kept in a good sanitary condition, as the owners are desirous of gaining State approval as a means of increasing their patronage.

"Insanitary tourist camps are a health menace of no minor magnitude. New York and a few other States have made additions to their sanitary codes which give their State boards of health effectual

jurisdiction over all tourist camps and swimming pools within their respective States. Such an addition to the Texas sanitary code would be very helpful."

VACCINATION PROTECTS

Although the efficacy of vaccination and revaccination in preventing individuals from contracting smallpox is now accepted by all scientific workers in the field of disease prevention, frequently there occur small outbreaks among family groups or other close contacts which bring out so vividly the protection afforded by this simple prophylactic measure that they are worthy of notice The report printed below, a typical example of many such instances, is taken from the Sanitary Bulletin for September, 1926, published by the Department of Health, of Buffalo, N. Y

The following report by the New York Department of Health is a clean-cut illustration of the value of vaccination On July 30 a young colored man visited the department of health to consult a physician regarding a skin eruption which had broken out on his body Upon examination he gave a history of having been taken ill on July 21 with fever and headache, which persisted until July 24, when the symptoms subsided and a first rash appeared. He returned to work but was referred to the health department for diagnosis. Examination showed a pustular eruption on the face, body, and extremities The history of the sickness before the appearance of the rash and the remission of symptoms, as was also the distribution of the eruption, were typical of smallpox. The patient had never been vaccinated Investigation was then made at his home and a recovered case of smallpox was found in a woman 23 years of age who lived in the same family. This case had never been diagnosed nor reported nor had the patient ever been vaccinated. Further examination disclosed a third man, 23 years of age, who had visited the two cases mentioned, and who had also just recovered from smallpox which had not been diagnosed nor reported to the health department, nor had he been vaccinated He was apparently the cause of the infection in the preceding two cases Interesting facts in connection with these two cases are that at the home of the first cases there were four persons exposed; two of these showed signs of successful vaccination and they escaped the disease; the other two, as stated in the history, had never been vaccinated and contracted the disease. The wife of the third case found upon investigation showed signs of two successful vaccinations, and though in most intimate contact with the patient during the entire period of infection she escaped the disease. Out of five persons exposed, therefore, the only two who contracted the disease were those who had never been vaccinated.

These cases demonstrate the lesson learned in thousands of experiences that successful vaccination and revaccination is the potent and easy method of eradicating smallpox.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Public Health in Persia. Dr. A. R Neligan, British representative on the Persian Sanitary Council. *The Lancet*, No. 5351, March 20, 1926, pp. 635–639, No 5352, March 27, 1926, pp 690–694 (Abstract by I W. Mendelsohn.)

On the basis of information obtained from various reports, the writer discusses public health in Persia for the period 1914–1924 under the following headings: Geography and climate, medical education, central sanitary administration, municipal health services, frontiers, pilgrim traffic, quarantine stations, shrines, public vaccination service, hospitals, nursing, Pasteur Institute, epidemic and endemic diseases, plague in the interior, typhus fever and relapsing fever, influenza, malaria, tuberculosis, venereal disease, smallpox, leprosy, other infectious diseases, epizootic diseases.

Physical conditions of Persia —Difficulties experienced in obtaining accurate sanitary information about Persia result from the following conditions: (1) Of 10,000,000 population, 2,000,000 are nomads; (2) the country is mainly an elevated plateau 2,000 to 5,000 feet above the sea, with the central and eastern portion a vast waterless desert; (3) main roads are few and bad, and journeys are slow even by motor car—there are no railways, (4) telegraphic and postal communications are possible only with the larger towns and along the main routes.

Central sanitary administration —The chief sanitary authority is the Persian Sanitary Council which is composed of 12 Persian doctors, representatives of the Persian ministries, the police and customs departments, and medical representatives of the British, American, French, and German legations. The duties of the council are as follows: (1) To act as advisory body to the Persian Government on all questions of public health and international sanitation, (2) to deal with epidemics in the country; (3) to organize and supervise the sanitary defenses of the frontiers; (4) to receive and collate sanitary reports; (5) to carry on public vaccination; (6) to supervise the importation and distribution of morphine, cocaine, and their derivatives. The funds available are very inadequate Medical education in Persia is of a very low standard.

Water supplies.—Some towns obtain their water supplies from wells. In most places water is derived from distant underground springs and is brought in artificial underground channels which gradually approach the surface near the points where the water is required. Thence the water runs in open courses It is drunk as well as used for irrigation and all domestic purposes, including the special ablutions of Mussulmans. It has been found impossible to check the washing of clothes in the water channels.

Sewage disposal.—A simple pit of greater or less depth is still the sole sanitary contrivance in Persia; the soil is absorbent in the greater part of the country Uncared for, as it frequently is, the pit becomes a nuisance and a danger In towns there is a great scarcity of public latrines, and most waste pieces of ground are used as squatting places

Plague and cholera—Persia's three long land frontiers run with those of countries liable to outbreaks of plague and cholera. Pilgrimages and lack of adequate quarantine facilities increase the danger Plague has occurred in several places in Persia in the period under discussion. Cholera is a much more troublesome problem than plague Several epidemics have occurred in Persia in the period under report

Malaria—The most serious disease in Persia by far is malaria. It causes heavy mortality every year and keeps the inhabitants of whole districts in a low physical condition. Along the Caspian Sea on the north is a belt of rice, cotton, and marsh country, varying from 2 to 40 miles in width, with dense forest. The rainfall is high There are numerous rivers, moderate temperatures, mist, perpetual dampness, and rank vegetation

On the plateau there are heavily infected districts due to water storage and irrigation methods and the nature of the rivers. In towns such as Teheran every house and every garden has at least one tank for irrigation, domestic purposes, and religious ablutions. In addition, many houses have underground cisterns for storing drinking water, which are filled from surface channels. All the tanks and cisterns are breeding places for mosquitoes. The plateau rivers end in swamps

Quinine treatment as given by Persian doctors is inadequate. The writer states that he has proved the efficiency of gold fish as as larvicides in experiments made in the garden of the British Legation in 1906.

From the Old Oaken Bucket to a Modern Safe Water Supply. J. A. Jensen, Supervisor, Water Works, Minneapolis, Minn. *American City*, vol. 35, No 3, September, 1926, pp. 323–325. (Abstract by A. S. Bedell.)

In a brief review of the advance in water-works practice during the last thirty years, the writer indicates clearly the broad and complicated field of endeavor in the water works business, and the need for properly qualified, versatile men capable of keeping step with the advancement and progress of the art.

Typhoid in City and Country. Charles N. Leach and Kenneth F. Maxcy. *Water Works*, vol. 65, No. 6, June 9, 1926, pp. 295–296. (Abstract by E. C. Sullivan.)

A study of typhoid fever was made in Alabama in an attempt to establish its relative incidence in population units of various sizes Knowing the epidemiology of typhoid fever, it would be suspected that the highest incidence would be found in the small town—that unit of population where communal living is most primitive and sanitary safeguards are least in evidence. The results of the analysis of the data, including tabular presentation, are published in this article.

From inspection of the tables it is found that the highest incidence of typhoid fever in Alabama, as gauged by both morbidity and mortality, is found in the small unincorporated towns having a population of 500 to 1,000 With the towns of successively larger population, the rates become progressively smaller, reaching a minimum figure in the three largest cities of the State In direct contrast to the high rate of the small towns is the low rate in the country districts and the small unincorporated communities The rate of this last group is as low as that in the large cities.

The most fruitful field for typhoid reduction is the small incorporated town. In Alabama, although contributing only 7 per cent of the total population of the State, these communities furnish annually 28 per cent of the typhoid fever cases. . The population living in the unincorporated towns and country districts, having comparative protection by virtue of their very lack of contact with their fellowmen and constituting 71 per cent of the total population of the State, contribute only 41 per cent of the annual typhoid fever toll. The risk of typhoid fever in this part of the population would appear to be no greater than that of persons living in the large and relatively large cities.

Less Typhoid Fever During 1925. Anon , *Health News*, New-York State Health Department, vol. 3, No 22, May 31, 1926, p. 85. (Abstract by Isador W Mendelsohn.)

In 1925, seven typhoid fever outbreaks in New York State were due to infected milk and two to polluted water. Thirty typhoid carriers were discovered, to which 122 primary and 7 secondary cases of the disease were attributed There were 1,483 up-State cases against 1,602 in 1924, giving a case rate of 28 per 100,000 population.

Studies of the Epidemiology of Malaria in the Coastal Lowlands of Brazil, Made Before and After the Execution of Control Measures. Mark F. Boyd. Reprinted from the *American Journal of Hygiene*, Monographic Series, No 5, May, 1926. (Abstract by K. F. Maxcy.)

The object of this study was "to ascertain a simple, economical, and effective method of malaria control adapted to a tropical area, which will offer prospects of permanent relief with a minimum of maintenance." The report contains an outline of the data collected during three years of investigation.

Four towns in the lowlands adjacent to Guanabara Bay in the State of Rio de Janeiro were selected. Topographical, climatic, demographic, sociologic, and economic factors are discussed in their relationship to the local malaria problem.

Anophelines of the coastal zone of Brazil are reviewed. On the basis of relative numbers, seasonal prevalence, association with human habitations, blood meal preference, and dissections, it is concluded that *A argyritarsis* is the principal propagator of malaria and that *A tarsimaculatus* plays a secondary rôle Eight other species of *Anopheles* are found in the area, but are unimportant as vectors.

The prophylactic work was based on the belief that the soundest method for the solution of a malaria problem is an attack on the larval stages of the transmitting species of anophelines (species control), within a 1-kilometer zone about the population center to be protected. In addition to the antilarval work, a considerable amount of quinine was distributed, free of charge, in three of the four areas

The costs of various enterprises in ditching, filling, stream cleaning, etc , and the maintenance required, are given The drainage executed was exclusively by means of open ditches at a cost of from $88 to $107 per kilometer (current rate of exchange).

Next to drainage, top minnows, *Poecilia vivipara*, were probably the most important factor in degree of "spontaneous" larval control secured. The use of oil was most widespread, though paris green was found valuable in certain areas The author emphasizes the necessity of using an unadulterated paris green.

Splenic and parasitic indices were made at approximately six-month intervals. The first three were taken before the initiation of control measures, the fourth and fifth were taken during the progress and at the close of the first year (1924) of control work; the last during the height of the malaria season in the spring of 1925.

In Magé, population 2,255, an area of light endemicity, the spleen rate at successive surveys was 6, 12, 5, 2, 3. The cost of the work during the first year was about $1 60 per capita, and of maintenance, second year, about $0.70. It is concluded that, owing to the work done and to favorable natural conditions, a very decided reduction in malaria transmission was effected which was well worth the money and effort expended.

In Itamby, population 450, an area of moderately high endemicity, the spleen rates at successive surveys were 73, 77, 75, 77, 73, 43; the per capita costs were, first year, $5.50; second year, $2 The results are regarded by the author as highly satisfactory.

In Porto das Caixas, population 457, about the same sort of area, the spleen rates were 78, 86, 85, 72, 67, 75; the per capita costs, first year, $6; second year, $3. The degree of malaria control achieved was not in proportion to the effort.

In Sant' Anna, population 198, considered to have the most intense degree of endemicity, the successive spleen indices were 76, 85, 72, 66, 75, and 74. Only one year of control work was attempted and this cost about $3 per capita The results were considered unsatisfactory.

(Abstractor's Note: In general, so far as the coastal region of tropical Brazil is concerned, one gathers from this elaborate report that the question propounded in the beginning is answered in the negative. In a town where the disease is lightly endemic and little transmission taking place, the disease may be virtually eradicated at a reasonable cost by antilarval measures and the liberal distribution of quinine In areas of moderate or high endemicity, some degree of reduction in malaria may be effected, but the eradication of the disease is not economically possible with present knowledge and the low per capita wealth)

DEATH RATES IN A GROUP OF INSURED PERSONS

Rates for Principal Causes of Death for August, 1926

The accompanying table is taken from the Statistical Bulletin for September, 1926, published by the Metropolitan Life Insurance Co , and presents the mortality experience of the industrial insurance department of the company for August, 1926, as compared with July, 1926, and with August and year, 1925. The rates are based on a strength of approximately 17,000,000 insured persons in the industrial populations of the United States and Canada. The annual death rates for all causes in this group are lower than those for the general population. For the years 1920–1924 they were from 71 to 75 per cent of the rates for the Registration Area.

The Bulletin states:

The death rate in the industrial populations of the United States and Canada, in August, declined slightly as compared with the preceding month This reflects the usual seasonal improvement that is observed at this time of the year. Compared with August, 1925, there was an increase from a rate of 7 6 per 1,000 to 7.9.

The table shows higher rates in August than prevailed a year ago for every cause of major numerical importance, although in no case is there a marked rise in the mortality. For August and each of the two months immediately preceding, the tuberculosis death rate increased over last year, and the cumulative rate for tuberculous disease is now substantially the same as at this time last year. It is now possible that 1926 will break the long sequence of years which have shown year-to-year drops in the tuberculosis death rate. * * * The reduction in the tuberculosis rate has been marked during several decades, and the time was bound to come when either a decided retardation in the velocity of the decline would be experienced, or a new low point established which could not be bettered for some years to come. In so far as can be judged by an analysis of data available at this time, the failure to improve over last year's tuberculosis

death rate is due, entirely, to an increase among the colored policyholders Up to the end of June, there was a drop of 2 8 per cent from the corresponding figure of 1925 among the white industrial population of the United States and Canada.

It is predicted that a considerable reduction will be shown in 1926 in the death rate for diarrheal diseases, as in each of the three months in which these conditions are most prevalent—June, July, and August—the rate declined markedly from the figure recorded last year.

A decline is also shown in the death rate for puerperal conditions.

Automobile fatalities in this group were fewer in August and July than during the corresponding months of 1925; and up to the week ended September 18 the cumulative death rate for automobile accidents was slightly lower than that for the corresponding period of last year. The improvement, however, in July and August is to be credited for this showing, since the first six months of this year recorded the usual increase in this cause of death.

Death rates (annual basis) for principal causes per 100,000 lives exposed, July and August, 1926, and August and year, 1925

[Industrial department, Metropolitan Life Insurance Co]

Cause of death	Rate per 100,000 lives exposed*			
	Aug , 1926	July, 1926	Aug , 1925	Year 1925
Total, all causes	785 8	823 1	763 4	907 5
Typhoid fever	4 8	3 1	7 1	4 6
Measles	3 1	6 6	1 4	3 3
Scarlet fever	2 0	2 6	1 8	3 5
Whooping cough	7 9	8 7	8 8	7 7
Diphtheria	5 7	5 8	5 2	10 6
Influenza	5 0	9 3	3 9	22 0
Tuberculosis (all forms)	89 0	98 1	83 4	98.1
Tuberculosis of respiratory system	75 3	84 5	71 9	85.9
Cancer	72.3	69 1	63 9	70 5
Diabetes mellitus	13.1	13 1	11 4	15.2
Cerebral hemorrhage	45.2	48 2	43 2	53 6
Organic diseases of heart	99 6	117 2	96.7	126.6
Pneumonia (all forms)	36.0	48 0	33 5	86 5
Other respiratory diseases	10 2	10.6	9 6	13.2
Diarrhea and enteritis	49 7	31.2	61.5	30 7
Bright's disease (chronic nephritis)	58.4	61 2	57 2	69 8
Puerperal state	13 2	14.5	14 2	16.5
Suicides	6 7	6 8	5.3	6.9
Homicides	6 2	7 5	6 7	7 2
Other external causes (excluding suicides and homicides)	70 6	71 0	71 2	64 3
Traumatism by automobiles	15 6	17 3	18 8	16.6
All other causes	187 3	190 6	177 3	190 7

*All figures include infants insured under one year of age

DEATHS DURING WEEK ENDED OCTOBER 16, 1926

Summary of information received by telegraph from industrial insurance companies for week ended October 16, 1926, and corresponding week of 1925. (From the Weekly Health Index, October 20, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Oct 16, 1926	Corresponding week, 1925
Policies in force	65, 563, 132	61, 481, 129
Number of death claims	10, 241	9, 300
Death claims per 1,000 policies in force, annual rate	8. 1	7. 9

Deaths from all causes in certain large cities of the United States during the week ended October 16, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, October 20, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Oct 16, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Oct 16, 1926 [2]
	Total deaths	Death rate [1]		Week ended Oct 16, 1926	Corresponding week, 1925	
Total (65 cities)	6,407	11.6	12.0	804	854	[3] 66
Akron	37			6	9	65
Albany [4]	20	8.8	12.8	0	3	0
Atlanta	72			9	7	
White	41			6		
Colored	31	(5)		3		
Baltimore [4]	208	13.4	14.5	34	35	104
White	152			23		87
Colored	56	(5)		11		175
Birmingham	60	14.8	11.2	9	10	
White	37			3		
Colored	23	(5)		6		
Boston	191	12.7	12.4	35	22	98
Bridgeport	16			0	4	0
Buffalo	146	14.0	14.5	13	20	54
Cambridge	32	13.7	8.3	8	1	142
Camden	26	10.3	10.1	1	4	17
Canton	22	10.4	8.3	3	5	66
Chicago [4]	614	10.5	10.2	65	83	57
Cincinnati	101	12.8	15.3	26	12	162
Cleveland	208	11.3	9.2	27	23	70
Columbus	71	13.0	14.2	14	8	131
Dallas	44	11.5	12.1	4	10	
White	30			4		
Colored	14	(5)		0		
Dayton	30	8.8	10.3	6	6	99
Denver	80	14.6	12.1	9	5	
Des Moines	29	10.4	13.6	7	3	117
Detroit	226	9.1	11.6	38	53	62
Duluth	21	9.7	10.4	2	0	46
El Paso	27	12.9	11.4	4	4	
Erie	22			1	7	20
Fall River [4]	27	10.7	10.5	5	1	78
Flint	28	10.7	6.4	7	6	119
Fort Worth	20	6.6	12.7	4	5	
White	19			3		
Colored	1	(5)		1		
Grand Rapids	35	11.7	11.5	5	4	72
Houston	54			3	5	
White	41			3		
Colored	13	(5)		0		
Indianapolis	102	14.5	14.5	10	11	76
White	82			9		78
Colored	20	(5)		1		57
Jersey City	58	9.5	10.9	8	12	60
Kansas City, Kans	21	9.4	9.0	0	3	0
White	14			0		0
Colored	7	(5)		0		0
Kansas City, Mo	92	12.8	10.2	14	10	
Los Angeles	205			13	28	36
Louisville	81	13.6	12.1	11	7	94
White	60			9		87
Colored	21	(5)		2		140
Lowell	35			8	4	154
Lynn	14	7.0	11.1	2	5	53
Memphis	81	23.9	18.8	7	9	
White	43			4		
Colored	38	(5)		3		
Milwaukee	71	7.2	11.1	8	19	38
Minneapolis	76	9.1	10.9	6	8	33
Nashville [4]	50	19.0	14.9	8	4	
White	28			3		
Colored	22	(5)		5		
New Bedford	18			1	8	17
New Haven	35	10.0	12.8	3	1	41
New Orleans	134	16.7	16.5	13	20	
White	91			9		
Colored	43	(5)		4		

Footnotes at end of table

Deaths from all causes in certain large cities of the United States during the week ended October 16, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Oct 16, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Oct 16, 1926 [2]
	Total deaths	Death rate [1]		Week ended Oct 16, 1926	Corresponding week, 1925	
New York, N Y	1,267	11.2	11.7	143	100	58
Bronx Borough	164	9.5	9.0	13	8	43
Brooklyn Borough	43[illegible]	10.1	10.0	56	63	57
Manhattan Borough	525	14.6	15.8	61	74	68
Queens Borough	111	7.6	8.5	11	13	50
Richmond Borough	31	11.3	16.2	2	2	35
Newark N J	89	10.1	11.1	12	9	58
Norfolk	35	10.5	10.5	7	3	141
White	16			3		98
Colored	19	(5)		4		212
Oakland	58	11.6	7.6	6	2	70
Oklahoma City	23			1	1	
Omaha	47	11.4	11.8	7	5	74
Paterson	21	7.7	12.5	0	3	0
Philadelphia	449	11.7	12.6	62	60	83
Pittsburgh	148	12.1	13.6	24	19	80
Portland, Oreg	70			6	3	60
Providence	72	13.7	10.1	7	6	58
Richmond	62	17.1	12.0	6	4	75
White	35			4		78
Colored	27	(5)		2		69
Rochester	62	10.1	12.2	11	13	87
St Louis	193	12.1	12.4	10	25	
St Paul	55	11.6	12.7	4	6	35
Salt Lake City [4]	29	11.4	13.5	6	6	91
San Antonio	35	8.9	14.7	8	9	
San Diego	37	17.5	18.2	2	5	42
San Francisco	155	14.3	12.3	7	10	42
Schenectady	22	12.3	10.1	1	2	29
Seattle	65			2	6	10
Somerville	14	7.3	11.1	2	3	57
Spokane	30	14.4	14.4	1	2	23
Springfield, Mass	34	12.2	12.5	3	4	46
Syracuse	56	15.9	13.2	7	4	89
Toledo	59	10.5	13.4	11	11	106
Trenton	30	11.7	17.0	7	4	119
Utica	22	11.1	14.9	3	5	68
Washington, D C	128	12.6	16.8	12	18	69
White	75			7		58
Colored	53	(5)		5		91
Waterbury	17			3	5	71
Wilmington, Del	25	10.5	13.2	3	6	67
Worcester	40	10.8	11.8	4	5	48
Yonkers	21	9.4	8.3	4	2	90
Youngstown	31	9.8	8.8	8	11	101

[1] Annual rate per 1,000 population
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 63 cities
[4] Deaths for week ended Friday, Oct 15, 1926
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta 31, Baltimore, 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Indianapolis 11, Kansas City, Kans, 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C, 25

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended October 23, 1926

ALABAMA

	Cases
Cerebrospinal meningitis	1
Chicken pox	1
Dengue	1
Diphtheria	101
Influenza	86
Malaria	147
Measles	6
Mumps	2
Pellagra	5
Pneumonia	20
Poliomyelitis	1
Scarlet fever	35
Smallpox	3
Tetanus	2
Tuberculosis	37
Typhoid fever	41
Typhus fever	3
Whooping cough	16

ARIZONA

Chicken pox	1
Measles	10
Tuberculosis	15

ARKANSAS

Chicken pox	3
Diphtheria	12
Influenza	22
Malaria	101
Measles	4
Paratyphoid fever	1
Pellagra	5
Poliomyelitis	2
Scarlet fever	5
Smallpox	1
Tuberculosis	3
Typhoid fever	31
Whooping cough	15

CALIFORNIA

	Cases
Cerebrospinal meningitis	
Fresno County	1
Oakland	1
Chicken pox	148
Diphtheria	117
Influenza	10
Jaundice	2
Leprosy—San Bernardino County	1
Lethargic encephalitis—Glendale	1
Measles	507
Poliomyelitis	
Humboldt County	1
Los Angeles County	2
San Bernardino County	1
San Diego	1
Ventura County	1
Scarlet fever	192
Smallpox	7
Tuberculosis	191
Typhoid fever	13
Whooping cough	58

COLORADO

Chicken pox	15
Diphtheria	20
Malaria	1
Measles	1
Pneumonia	2
Scarlet fever	47
Tuberculosis	42
Typhoid fever	5
Vincent's angina	2
Whooping cough	4

CONNECTICUT

Chicken pox	49
Diphtheria	26
German measles	2
Lethargic encephalitis	1

CONNECTICUT—continued

	Cases
Measles	20
Mumps	1
Paratyphoid fever	1
Pneumonia (broncho)	13
Pneumonia (lobar)	14
Poliomyelitis	1
Scarlet fever	31
Septic sore throat	2
Tuberculosis (pulmonary)	27
Typhoid fever	4
Whooping cough	29

DELAWARE

Chicken pox	3
Diphtheria	2
Malaria	1
Ophthalmia neonatorum	1
Pneumonia	1
Scarlet fever	14
Tuberculosis	2
Typhoid fever	4
Whooping cough	1

FLORIDA

Dengue	1
Diphtheria	52
Influenza	1
Malaria	16
Measles	3
Mumps	1
Paratyphoid fever	3
Pneumonia	2
Scarlet fever	5
Smallpox	2
Tetanus	1
Trachoma	1
Tuberculosis	26
Typhoid fever	24
Typhus fever	2
Whooping cough	3

GEORGIA

Cerebrospinal meningitis	1
Chicken pox	12
Dengue	1
Diphtheria	99
Dysentery	6
Hookworm disease	1
Influenza	40
Malaria	135
Measles	3
Mumps	2
Pellagra	2
Pneumonia	20
Scarlet fever	21
Septic sore throat	16
Smallpox	12
Tuberculosis	13
Typhoid fever	55
Typhus fever	1
Whooping cough	9

IDAHO

Cerebrospinal meningitis—Weiser	1
Chicken pox	19
Diphtheria	3
Measles	11
Scarlet fever	28
Typhoid fever	1
Whooping cough	1

ILLINOIS

	Cases
Cerebrospinal meningitis	
Madison County	1
Winnebago County	1
Chicken pox	157
Diphtheria	123
Influenza	11
Lethargic encephalitis	
Brown County	1
Cook County	2
Effingham County	1
Kankakee County	1
Measles	178
Mumps	27
Pneumonia	150
Poliomyelitis	
Cook County	2
Henry County	1
Macon County	1
McHenry County	1
Scarlet fever	199
Tuberculosis	429
Typhoid fever	87
Whooping cough	196

INDIANA

Chicken pox	80
Diphtheria	117
Influenza	13
Measles	17
Pneumonia	6
Poliomyelitis	2
Scarlet fever	131
Smallpox	26
Tuberculosis	34
Typhoid fever	43
Whooping cough	44

IOWA

Chicken pox	33
Diphtheria	34
German measles	1
Impetigo contagiosa	1
Measles	15
Mumps	4
Scarlet fever	36
Smallpox	3
Tuberculosis	22
Typhoid fever	12
Vincent's angina	1
Whooping cough	7

KANSAS

Cerebrospinal meningitis	
Hope	1
Hutchinson	1
Mulvane	1
Chicken pox	32
Diphtheria	44
Influenza	1
Malaria	1
Measles	52
Mumps	15
Pneumonia	11
Scarlet fever	62
Smallpox	4
Tuberculosis	40
Typhoid fever	20
Whooping cough	24

LOUISIANA

	Cases
Cerebrospinal meningitis	1
Diphtheria	36
Influenza	12
Malaria	32
Pneumonia	24
Scarlet fever	15
Tuberculosis	38
Typhoid fever	23
Whooping cough	4

MAINE

	Cases
Chicken pox	29
Diphtheria	6
Impetigo contagiosa	14
Influenza	8
Measles	40
Mumps	13
Pneumonia	13
Poliomyelitis	1
Scarlet fever	29
Tuberculosis	6
Typhoid fever	10
Whooping cough	51

MARYLAND[1]

	Cases
Cerebrospinal meningitis	1
Chicken pox	42
Diphtheria	47
Dysentery	6
German measles	6
Influenza	7
Malaria	1
Measles	7
Mumps	7
Paratyphoid fever	1
Pneumonia (broncho)	15
Pneumonia (lobar)	13
Poliomyelitis	2
Scarlet fever	37
Septic sore throat	1
Tuberculosis	22
Typhoid fever	47
Typhus fever	1
Whooping cough	43

MASSACHUSETTS

	Cases
Chicken pox	84
Conjunctivitis (suppurative)	1
Diphtheria	69
Dysentery	1
German measles	6
Influenza	4
Lethargic encephalitis	3
Malaria	1
Measles	39
Mumps	62
Ophthalmia neonatorum	34
Pneumonia (lobar)	44
Poliomyelitis	9
Scarlet fever	170
Septic sore throat	2
Trachoma	1
Tuberculosis (pulmonary)	90
Tuberculosis (other forms)	27
Typhoid fever	16
Whooping cough	70
Diphtheria	191

[1] Week ended Friday.

MICHIGAN

	Cases
Measles	30
Pneumonia	58
Scarlet fever	140
Smallpox	8
Tuberculosis	134
Typhoid fever	22
Whooping cough	107

MINNESOTA

	Cases
Chicken pox	81
Diphtheria	81
Influenza	2
Lethargic encephalitis	1
Measles	63
Pneumonia	3
Scarlet fever	20
Smallpox	7
Tuberculosis	40
Typhoid fever	5
Whooping cough	15

MISSISSIPPI

	Cases
Cerebrospinal meningitis	1
Diphtheria	29
Poliomyelitis	2
Scarlet fever	11
Smallpox	14
Typhoid fever	23

MISSOURI

	Cases
Cerebrospinal meningitis	2
Chicken pox	8
Diphtheria	77
Influenza	11
Malaria	5
Measles	16
Mumps	2
Pneumonia	1
Poliomyelitis	1
Scarlet fever	55
Smallpox	4
Trachoma	1
Typhoid fever	27
Whooping cough	12

NEBRASKA

	Cases
Cerebrospinal meningitis	1
Chicken pox	4
Diphtheria	6
Measles	4
Mumps	3
Scarlet fever	25
Smallpox	54
Typhoid fever	1
Whooping cough	8

NEW JERSEY

	Cases
Cerebrospinal meningitis	2
Chicken pox	98
Diphtheria	118
Influenza	[illegible]
Malaria	1
Measles	15
Pneumonia	51
Poliomyelitis	3
Scarlet fever	73
Typhoid fever	33
Whooping cough	96

NEW MEXICO

	Cases
Chicken pox	2
Conjunctivitis	2
Diphtheria	3
Measles	2
Mumps	1
Pneumonia	6
Rabies (in animals)	1
Scarlet fever	13
Smallpox	1
Tuberculosis	24
Typhoid fever	6
Whooping cough	1

NEW YORK

(Exclusive of New York City)

	Cases
Cerebrospinal meningitis	4
Chicken pox	170
Diphtheria	80
Dysentery	4
German measles	35
Influenza	1
Lethargic encephalitis	1
Malaria	3
Measles	236
Mumps	79
Ophthalmia neonatorum	1
Pneumonia	118
Poliomyelitis	23
Scarlet fever	57
Smallpox	5
Tetanus	8
Typhoid fever	53
Vincent's angina	8
Whooping cough	150

NORTH CAROLINA

	Cases
Chicken pox	21
Diphtheria	158
German measles	4
Malaria	4
Measles	5
Poliomyelitis	2
Scarlet fever	73
Septic sore throat	4
Smallpox	7
Typhoid fever	11
Whooping cough	141

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Diphtheria	55
Influenza	76
Malaria	84
Pneumonia	13
Poliomyelitis—Tulsa County	1
Scarlet fever	30
Smallpox	3
Typhoid fever	92
Whooping cough	16

OREGON

	Cases
Chicken pox	13
Diphtheria	20
Influenza	12
Measles	[illegible]
Mumps	3
Pneumonia	[2] 6
Poliomyelitis	1
Scarlet fever	45
Septic sore throat	2
Smallpox	13
Tuberculosis	[2] 1
Typhoid fever	11
Whooping cough	6

[2] Deaths.

PENNSYLVANIA

	Cases
Chicken pox	173
Diphtheria	146
German measles	4
Impetigo contagiosa	49
Lethargic encephalitis—Philadelphia	1
Malaria	1
Measles	262
Mumps	30
Ophthalmia neonatorum—Philadelphia	2
Pellagra—Pittsburgh	1
Pneumonia	35
Poliomyelitis	
Bradford	1
Clintonville	2
Scattering	6
Scabies	5
Scarlet fever	186
Tuberculosis	130
Typhoid fever	72
Whooping cough	216

RHODE ISLAND

	Cases
Chicken pox	5
Diphtheria	8
Influenza	1
Measles	2
Pneumonia	2
Poliomelitis	
North Smithfield	1
Providence	1
Scarlet fever	5
Tuberculosis	9
Whooping cough	8

SOUTH DAKOTA

	Cases
Diphtheria	1
Measles	78
Pneumonia	2
Scarlet fever	23
Smallpox	1
Typhoid fever	3
Whooping cough	7

TENNESSEE

	Cases
Chicken pox	1
Diphtheria	
Memphis	10
Nashville	19
Scattering	72
Influenza	13
Lethargic encephalitis—Hawkins County	1
Malaria	57
Measles	2
Ophthalmia neonatorum	2
Pellagra	7
Pneumonia	15
Scarlet fever	59
Tuberculosis	20
Typhoid fever	123
Whooping cough	62

TEXAS

	Cases
Chicken pox	10
Diphtheria	48
Dysentery	1
Influenza	5
Measles	1
Paratyphoid fever	2
Pellagra	1
Pneumonia	4
Scarlet fever	18
Smallpox	4
Tetanus	1
Tuberculosis	11
Typhoid fever	12
Whooping cough	11

UTAH

	Cases
Chicken pox	26
Diphtheria	9
German measles	11
Influenza	1
Measles	105
Mumps	2
Pneumonia	5
Scarlet fever	17
Smallpox	6
Whooping cough	8

VERMONT

	Cases
Chicken pox	16
Diphtheria	2
Measles	100
Mumps	15
Scarlet fever	2
Whooping cough	22

WASHINGTON

	Cases
Cerebrospinal meningitis	1
Chicken pox	81
Diphtheria	25
German measles	2
Lethargic encephalitis	1
Measles	13
Mumps	17
Scarlet fever	67
Smallpox	19
Trachoma	1
Tuberculosis	32
Typhoid fever	9
Whooping cough	6

WEST VIRGINIA

	Cases
Cerebrospinal meningitis—Pleasants County	1
Chicken pox	46
Diphtheria	62
Influenza	16
Measles	21
Scarlet fever	71
Tuberculosis	20
Typhoid fever	74
Whooping cough	51

WISCONSIN

	Cases
Milwaukee:	
Chicken pox	27
Diphtheria	17
German measles	2
Measles	3
Mumps	30
Ophthalmia neonatorum	1
Pneumonia	8
Scarlet fever	10
Tuberculosis	9
Typhoid fever	1
Whooping cough	59
Scattering:	
Cerebrospinal meningitis	1
Chicken pox	93
Diphtheria	23
German measles	3
Influenza	39
Measles	125
Mumps	17
Pneumonia	6
Poliomyelitis	5
Scarlet fever	61
Smallpox	4
Trachoma	1
Tuberculosis	30
Typhoid fever	3
Whooping cough	110

WYOMING

	Cases
Chicken pox	16
Diphtheria	4
Measles	9
Pneumonia	1
Scarlet fever	12
Tuberculosis	1
Tularaemia	2
Typhoid fever	2
Whooping cough	4

Reports for Week Ended October 16, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	2
Diphtheria	13
Lethargic encephalitis	1
Measles	1
Pneumonia	15
Scarlet fever	8
Tuberculosis	15
Typhoid fever	2
Whooping cough	13

MISSISSIPPI

	Cases
Diphtheria	24
Scarlet fever	17
Smallpox	1
Typhoid fever	17

NEW MEXICO

	Cases
Chicken pox	2
Conjunctivitis	1
Malaria	5
Pneumonia	4

NEW MEXICO—continued

	Cases
Rabies (in animals)	1
Scarlet fever	6
Tuberculosis	9
Typhoid fever	35
Whooping cough	9

NORTH DAKOTA

	Cases
Chicken pox	9
Measles	38
Mumps	3
Pneumonia	1
Smallpox	2
Tuberculosis	3
Typhoid fever	5
Whooping cough	21

SOUTH CAROLINA

	Cases
Chicken pox	1
Diphtheria	117
Hookworm disease	30
Influenza	357
Malaria	857
Measles	20
Paratyphoid fever	5
Pellagra	44
Poliomyelitis	7
Scarlet fever	40
Smallpox	6
Tuberculosis	32
Typhoid fever	58
Whooping cough	66

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
May, 1926										
Pennsylvania	6	580		2	15,308	0	3	2,310	5	78
June, 1926										
Pennsylvania	4	637		1	9,615	0	4	1,726	7	144
September, 1926										
Indiana	2	125	78		54		2	155	26	190
Louisiana	2	73	30	111	3	41	6	23	9	129
Maryland	3	95	15	12	16	2	15	71	1	283
Michigan	0	360	7		78		27	323	12	127
Minnesota	0	189	4		66		5	437	2	36
New York	21	538	63	20	328		201	394	6	478
Ohio	6	374	9	2	56		32	360	18	573
Rhode Island	3	17	6	1	7		4	15	0	12
Vermont	0	3			99		3	23	0	3
West Virginia	0	81	13		48		6	104	25	212

Number of Cases of Certain Communicable Diseases Reported for the Month of June, 1926, by State Health Officers

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	105	19	1,063	75	18	122	463	99	228
Arizona	9	5	30	6	31		79	30	16
Arkansas	50	6	145	42	38	6	40	63	149
California	870	503	2,150	867	608	103	974	111	369
Colorado	226	64	257	19	100	10	27	3	206
Connecticut	263	53	1,612	43	314	2	164	9	165
Delaware	2	6	92		17	0	10	3	7
District of Columbia	88	38	519		71	4	115	2	145
Florida	49	36	116	47	25	187	139	76	97
Georgia	67	21	460	59	5	71	96	153	83
Idaho	53	23	39	37	20	35	2	9	36
Illinois	1,122	367	4,813	284	947	105	1,793	65	801
Indiana	269	56	1,767		314	266	207	27	337
Iowa	66	40	334	22	116	96	56	(1)	60
Kansas	152	31	783	50	107	29	306	34	548
Kentucky [2]									
Louisiana	6	30	21	2	30	55	172	103	54
Maine	58	16	679	45	52	0	23	15	63
Maryland	275	68	878	374	254	2	321	46	282
Massachusetts	708	276	2,724	600	927		656	35	776
Michigan	626	434	3,957	82	1,189	30	454	38	566
Minnesota	426	245	2,489		851	23	346	19	174
Mississippi	427	34	1,143	720	21	35	419	264	1,854
Missouri	335	250	1,845	45	410	32	205	45	283
Montana	20	43	297	10	59	24	35	4	9
Nebraska [3]									
Nevada [4]									
New Hampshire [4]									
New Jersey	631	319	2,955		792	3	444	37	341
New Mexico	26	17	29	7	13	3	129	16	88
New York	1,725	618	10,110	910	1,815	29	1,751	85	1,689
North Carolina	303	74	1,520		82	127		87	1,277
North Dakota	24	20	110	17	146	13	7		64
Ohio	818	335	4,042	142	1,078	152	728	57	1,586
Oklahoma [5]	55	19	264	19	51	26	162	109	256
Oregon	139	75	346	68	169	162	52	23	134
Pennsylvania [3]									
Rhode Island	14	18	271	6	26	0	45	2	44
South Carolina	157	126	119	4	34	79	219	335	267
South Dakota	21	10	184	21	234	25	7	8	85
Tennessee	71	23	935	17	51	62	289	80	191
Texas [3]									
Utah [3]									
Vermont	82	1	429	54	11	0	[6] 23	2	176
Virginia	457	58	2,270		186	93	[6] 141	80	858
Washington	308	53	443	165	186	103	280	24	157
West Virginia	87	33	1,875		92	36	87	23	180
Wisconsin	622	125	5,465	303	312	2	163	10	532
Wyoming	41	7	39	7	56	2		3	61

[1] Reports not required by law.
[2] Reports received weekly.
[3] Reports not received at time of going to press.
[4] Reports received annually.
[5] Exclusive of Oklahoma City and Tulsa.
[6] Pulmonary.

Case Rates per 1,000 Population (Annual Basis) for the Month of June, 1926

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	0.51	0.09	5.20	0.37	0.09	0.60	2.26	0.48	1.11
Arizona	.26	.14	.87	.17	.90	-----	2.28	.87	.46
Arkansas	.33	.04	.94	.27	.25	.04	.26	.41	.97
California	2.56	1.48	6.33	2.55	1.79	.30	2.87	.33	1.09
Colorado	2.66	.75	3.02	.22	1.18	.12	.52	.04	2.42
Connecticut	2.05	.41	12.58	.34	2.45	.02	1.28	.07	1.29
Delaware	.10	.31	4.73	-----	.87	.00	.51	.15	.36
District of Columbia	2.10	.91	12.41	-----	1.70	.10	2.75	.05	3.47
Florida	.54	.39	1.27	.51	.27	2.04	1.52	.83	1.06
Georgia	.26	.08	1.81	.23	.02	.28	.38	.60	.33
Idaho	1.28	.56	.94	.89	.48	.85	.05	.22	.87
Illinois	1.94	.63	8.30	.49	1.63	.18	3.09	.11	1.35
Indiana	.82	.22	6.97	-----	1.24	1.05	.82	.11	1.33
Iowa	.32	.19	1.61	.11	.56	.46	.27	(1)	.29
Kansas	1.02	.21	5.23	.33	.71	.19	2.04	.23	3.66
Kentucky [2]	-----	-----	-----	-----	-----	-----	-----	-----	-----
Louisiana	.04	.19	.13	.01	.19	.35	1.11	.66	.35
Maine	.90	.25	10.52	.70	.81	.00	.36	.23	.98
Maryland	2.15	.53	6.88	2.93	1.99	.02	2.51	.36	2.21
Massachusetts	2.06	.80	7.93	1.75	2.70	-----	1.91	.10	2.26
Michigan	1.79	1.24	11.34	.24	3.41	.09	1.30	.11	1.62
Minnesota	2.00	1.15	11.67	-----	3.99	.11	1.62	.09	.82
Mississippi	2.90	.23	7.77	4.89	.14	.21	2.85	1.79	12.60
Missouri	1.17	.87	6.45	.16	1.43	.11	.72	.16	.99
Montana	.37	.79	5.44	.18	1.08	.44	.64	.07	.16
Nebraska [3]	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nevada [4]	-----	-----	-----	-----	-----	-----	-----	-----	-----
New Hampshire [4]	-----	-----	-----	-----	-----	-----	-----	-----	-----
New Jersey	2.15	1.09	10.67	-----	2.70	.01	1.51	.13	1.16
New Mexico	.83	.54	.92	.22	.41	.10	4.10	.51	2.80
New York	1.87	.67	10.95	.99	1.97	.03	1.90	.09	1.83
North Carolina	1.32	.32	6.62	-----	.36	.55	-----	.38	5.56
North Dakota	.42	.35	1.93	.30	2.56	.23	.12	-----	1.12
Ohio	1.55	.63	7.66	.27	2.04	.20	1.38	.11	3.00
Oklahoma [5]	.33	.11	1.58	.11	.31	.10	.97	.65	1.53
Oregon	1.97	1.06	4.91	.96	2.40	2.30	.74	.33	1.60
Pennsylvania [3]	-----	-----	-----	-----	-----	-----	-----	-----	-----
Rhode Island	.23	.34	5.16	.11	.49	.00	.85	.04	.83
South Carolina	1.06	.85	.81	.03	.23	.04	1.48	2.27	1.81
South Dakota	.38	.18	3.33	.38	4.24	.45	.13	.14	1.54
Tennessee	.35	.11	4.66	.08	.25	.31	1.19	.40	.95
Texas [2]	-----	-----	-----	-----	-----	-----	-----	-----	-----
Utah [1]	-----	-----	-----	-----	-----	-----	-----	-----	-----
Vermont	2.83	.03	14.81	1.86	.38	.00	[6] .79	.07	6.08
Virginia	2.25	.29	11.16	-----	.91	.46	[6] .69	.30	4.22
Washington	2.50	.43	3.59	1.34	1.51	.84	1.87	.19	1.27
West Virginia	.65	.25	14.03	-----	.69	.27	.65	.17	1.35
Wisconsin	2.67	.54	23.48	1.30	1.34	.01	.70	.04	2.29
Wyoming	2.20	.38	2.09	.38	3.00	.11	-----	.16	3.27

[1] Reports not required by law
[2] Reports received weekly
[3] Reports not received at time of going to press
[4] Reports received annually
[5] Exclusive of Oklahoma City and Tulsa.
[6] Pulmonary

Number of Cases of Certain Communicable Diseases Reported for the Month of July, 1926, by State Health Officers

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	18	33	308	66	32	97	373	417	242
Arizona	3	6	16	6	12	0	13	9	12
Arkansas	24	7	61	45	22	7	44	155	108
California	262	400	823	253	269	65	672	108	259
Colorado		42	79	4	37	6	147	20	146
Connecticut	126	47	394	12	121	0	268	23	146
Delaware	3	4	20	1	10	0	16	5	23
District of Columbia	25	49	114		21	0	81	6	110
Florida	12	66	55	34	14	48	285	63	101
Georgia	39	26	124	28	13	29	100	400	93
Idaho	19	11	52	21	28	21	5	13	19
Illinois	612	232	1,980	125	188	95	1,463	106	894
Indiana	131	97	638		171	185	199	65	469
Iowa	19	37	72	2	76	59	70	(1)	48
Kansas	37	49	180	39	89	21	155	86	369
Kentucky [2]									
Louisiana	2	25	1	2	24	5	168	186	45
Maine	39	10	359	23	70	12	55	6	152
Maryland	87	45	360	103	97	0	295	68	438
Massachusetts [3]									
Michigan	233	333	950	34	641	36	510	43	634
Minnesota	115	165	596	0	535	5	249	20	153
Mississippi	187	41	326	373	25	13	334	643	1,531
Missouri	38	163	407	15	189	26	240	152	385
Montana	11	1	44	10	41	29	48	14	27
Nebraska [3]									
Nevada [4]									
New Hampshire [4]									
New Jersey	227	221	592		249	2	474	43	449
New Mexico	5	16	9	5	6	0	123	30	57
New York	840	919	3,994	468	849	87	1,666	136	1,509
North Carolina	86	60	606		54	101		310	1,261
North Dakota	15	22	101	15	105	17	13	8	154
Ohio	439	302	941	50	417	93	666	84	1,759
Oklahoma [5]	14	24	63	19	51	16	134	413	271
Oregon	62	89	156	52	101	108	60	33	94
Pennsylvania [3]									
Rhode Island	13	14	101	5	13	0	55	0	97
South Carolina	83	49	40		17	46	271	573	258
South Dakota	11	29	152	11	115	16	9	11	77
Tennessee	41	14	261	9	53	29	218	590	338
Texas [2]									
Utah [2]									
Vermont	38	14	65	28	7	0		3	161
Virginia	111	64	638		68	44	[6] 142	188	559
Washington	115	128	183	77	115	85	166	35	164
West Virginia	50	42	391		64	45	121	81	272
Wisconsin	475	136	3,905	242	281	21	204	19	921
Wyoming	9	1	20	5	26	1	2	2	64

[1] Reports not required by law.
[2] Reports received weekly
[3] Reports not received at time of going to press.
[4] Reports received annually
[5] Exclusive of Oklahoma City and Tulsa.
[6] Pulmonary

Case Rates per 1,000 Population (Annual Basis) for the Month of July, 1926

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	0 09	0 16	1 46	0 31	0 15	0 46	1 76	1 97	1 14
Arizona	08	17	45	17	34	00	36	25	34
Arkansas	15	04	38	28	14	04	28	98	68
California	75	1 14	2 35	72	77	19	1 92	30	74
Colorado	------	48	90	05	42	07	1 67	23	1 66
Connecticut	95	36	2 98	09	91	00	2 02	17	1 10
Delaware	15	20	99	05	50	00	80	25	1 14
District of Columbia	58	1 13	2 64	------	49	00	1 87	14	2 55
Florida	13	70	58	36	15	51	3 02	67	1 07
Georgia	15	10	47	11	05	11	38	1 53	35
Idaho	44	26	75	49	66	49	12	30	44
Illinois	1 02	39	3 31	21	81	16	2 44	18	1 49
Indiana	50	37	2 44	------	65	71	76	25	1 79
Iowa	09	17	34	01	35	28	33	(1)	22
Kansas	24	32	1 16	25	58	14	1 00	56	2 38
Kentucky	------	------	------	------	------	------	------	------	------
Louisiana	01	16	01	01	15	03	1 04	1 16	28
Maine	58	15	5 38	34	1 05	18	82	09	2 28
Maryland	66	34	2 73	78	74	00	2 24	52	3 32
Massachusetts [3]	------	------	------	------	------	------	------	------	------
Michigan	65	92	2 64	09	1 78	10	1 42	12	1 76
Minnesota	52	75	2 70	00	2 43	02	1 13	09	69
Mississippi	1 23	27	2 14	2 45	16	09	2 20	4 23	10 07
Missouri	13	55	1 38	05	64	09	81	51	1 30
Montana	19	02	78	18	73	51	85	25	48
Nebraska [4]	------	------	------	------	------	------	------	------	------
Nevada [4]	------	------	------	------	------	------	------	------	------
New Hampshire [4]	------	------	------	------	------	------	------	------	------
New Jersey	75	73	1 95	------	82	01	1 56	14	1 48
New Mexico	15	49	28	15	18	00	3 79	92	1 75
New York	88	96	4 19	49	89	09	1 75	14	1 58
North Carolina	36	25	2 55	------	23	43	------	1 31	5 31
North Dakota	25	37	1 71	25	1 78	29	22	14	2.61
Ohio	80	55	1 72	09	76	17	1 22	15	3 22
Oklahoma [5]	08	14	37	11	30	09	78	2 39	1 57
Oregon	85	1 22	2 14	71	1 39	1 48	82	45	1 29
Pennsylvania [3]	------	------	------	------	------	------	------	------	------
Rhode Island	24	26	1 84	09	24	00	1 00	00	1 77
South Carolina	54	32	26	------	11	30	1 78	3 76	1 69
South Dakota	19	51	2 66	19	2 02	28	16	19	1 35
Tennessee	20	07	1 26	04	26	14	1 05	2.85	1 63
Texas [2]	------	------	------	------	------	------	------	------	------
Utah [2]	------	------	------	------	------	------	------	------	------
Vermont	1 27	.47	2 17	94	23	00	------	10	5 38
Virginia	53	30	3 03	------	32	21	[6] 68	89	2.66
Washington	90	1 00	1 44	60	90	67	1 30	27	1 29
West Virginia	36	30	2.83	------	46	33	.88	59	1 97
Wisconsin	1 98	.57	16 24	1 01	1 17	09	85	.08	3.83
Wyoming	47	.05	1.04	26	1 35	.05	10	.10	3 32

[1] Reports not required by law
[2] Reports received weekly
[3] Reports not received at time of going to press
[4] Reports received annually
[5] Exclusive of Oklahoma City and Tulsa.
[6] Pulmonary.

Number of Cases of Certain Communicable Diseases Reported for the Month of August, 1926, by State Health Officers

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	17	57	69	27	43	26	319	479	127
Arizona	...	18	5	3	14	1	101	9	13
Arkansas	49	8	17	32	16	40	62	312	147
California	157	270	462	212	214	39	726	121	196
Colorado	15	85	25	4	31	2	254	64	56
Connecticut	26	51	121	7	53	0	128	32	113
Delaware	...	5	...	...	9	...	14	5	11
District of Columbia	5	27	8	...	33	2	83	14	68
Florida [1]	...	...	...	...	...	...	...	...	...
Georgia	11	42	12	24	20	14	62	309	45
Idaho	8	22	8	26	15	5	2	20	31
Illinois	171	204	499	81	297	18	1,738	213	717
Indiana	24	73	115	...	119	73	136	85	290
Iowa	8	59	20	5	54	20	45	([2])	66
Kansas	14	46	42	6	85	11	121	125	159
Kentucky [3]	...	...	...	...	...	...	...	...	...
Louisiana	...	56	3	3	17	33	169	162	21
Maine	21	7	98	15	63	0	47	13	79
Maryland	21	46	67	25	31	0	265	168	391
Massachusetts	102	127	200	148	290	0	579	74	430
Michigan	85	326	241	20	268	43	462	73	623
Minnesota	37	148	95	...	320	7	212	38	134
Mississippi	273	70	277	270	32	7	357	442	1,290
Missouri	18	81	60	6	121	22	191	218	198
Montana	1	19	21	2	30	12	35	27	15
Nebraska [1]	...	...	...	...	...	...	...	...	...
Nevada [4]	...	...	...	...	...	...	...	...	...
New Hampshire [4]	...	...	...	...	...	...	...	...	...
New Jersey	59	163	126	...	123	0	416	78	430
New Mexico [1]	...	...	...	...	...	...	...	...	...
New York	290	548	825	240	305	22	1,284	291	1,233
North Carolina	31	149	171	...	89	129	...	377	983
North Dakota	11	16	62	3	101	6	28	9	84
Ohio	133	348	131	37	271	37	575	221	1,262
Oklahoma [5]	1	36	56	3	40	1	107	518	88
Oregon	9	51	79	35	83	40	53	34	33
Pennsylvania [1]	...	...	...	...	...	...	...	...	...
Rhode Island	4	15	11	1	15	0	46	4	45
South Carolina	30	76	11	2	23	35	192	543	181
South Dakota	11	10	68	...	77	5	16	16	39
Tennessee	18	46	84	3	72	9	164	807	254
Texas [1]	...	...	...	...	...	...	...	...	...
Utah [3]	...	...	...	...	...	...	...	...	...
Vermont	13	14	35	16	5	0	[6] 31	7	111
Virginia	43	128	171	...	92	16	[6] 276	312	633
Washington	48	68	57	24	98	61	160	55	133
West Virginia	10	65	106	...	63	13	135	128	237
Wisconsin	98	106	901	54	146	3	180	11	793
Wyoming	3	3	8	1	17	0	2	4	15

[1] Reports not received at time of going to press
[2] Reports not required by law
[3] Reports received weekly
[4] Reports received annually.
[5] Exclusive of Oklahoma City and Tulsa.
[6] Pulmonary

Case Rates per 1,000 Population (Annual Basis) for the Month of August, 1926

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Small-pox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	0.08	0.27	0.33	0.13	0.20	0.12	1.51	2.27	0.60
Arizona		50	14	08	39	03	2.82	25	36
Arkansas	31	05	11	20	10	25	39	1.96	92
California	45	77	1.32	60	61	11	2.07	34	56
Colorado	17	97	28	05	.35	.02	2.89	73	64
Connecticut	20	39	91	05	40	00	97	24	85
Delaware		25			45		70	25	55
District of Columbia	12	62	19		76	05	1.92	32	1.57
Florida [1]									
Georgia	04	16	05	09	08	05	24	1.18	17
Idaho	19	51	19	61	35	12	05	47	73
Illinois	29	34	83	14	50	03	2.90	36	1.20
Indiana	09	28	41		45	28	63	32	1.14
Iowa	04	28	09	02	25	09	21	(2)	31
Kansas	09	30	27	04	55	07	75	81	1.03
Kentucky [3]									
Louisiana		35	02	02	11	21	1.05	1.01	13
Maine	31	10	1.47	22	94	00	70	19	1.18
Maryland	16	35	51	19	24	00	2.01	1.27	2.96
Massachusetts	29	36	56	42	82	00	1.63	21	1.21
Michigan	24	90	67	06	74	12	1.28	20	1.73
Minnesota	17	67	41		1.45	03	96	17	61
Mississippi	1.79	46	1.82	1.78	21	05	2.35	2.91	8.48
Missouri	06	27	20	02	41	07	65	74	67
Montana	02	34	37	04	53	21	62	.48	27
Nebraska [1]									
Nevada [1]									
New Hampshire [4]									
New Jersey	19	54	42		41	00	1.37	26	1.42
New Mexico [1]									
New York	30	57	86	25	32	02	1.35	30	1.29
North Carolina	13	63	72		37	54		1.59	4.14
North Dakota	19	27	1.05	05	1.71	10	48	15	1.43
Ohio	24	64	24	07	30	07	1.05	41	2.31
Oklahoma [5]	01	21	32	02	23	01	62	3.00	51
Oregon	12	70	1.08	48	1.14	55	73	47	45
Pennsylvania [1]									
Rhode Island	07	27	20	02	27	00	84	07	82
South Carolina	20	50	07	01	15	23	1.26	3.56	1.19
South Dakota	19	18	1.19		1.35	09	28	28	68
Tennessee	09	22	40	01	35	04	79	3.89	1.23
Texas [1]									
Utah [3]									
Vermont	43	47	1.17	53	17	00	[6] 1.04	.23	3.71
Virginia	20	61	81		44	.08	[6] 1.31	1.48	3.01
Washington	38	53	45	19	77	48	1.26	.43	1.04
West Virginia	07	47	77		49	09	98	93	1.72
Wisconsin	41	44	3.75	22	61	01	75	.05	3.30
Wyoming	16	16	.42	05	88	00	10	21	78

[1] Reports not received at time of going to press
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[6] Pulmonary

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of September, 1926, to other State health departments by departments of health of certain States

Referred by—	Actinomycosis	Dysentery	Diphtheria	Erysipelas	Measles	Poliomyelitis	Scarlet fever	Trachoma	Tuberculosis	Typhoid fever	Vincent's angina
California									1		
Connecticut			1			1	1				
Illinois										9	
Minnesota	1	2		1				1	113	2	2
New York					1	2				2	
Rhode Island						2					

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended October 9, 1926, 35 States reported 1,602 cases of diphtheria For the week ended October 10, 1925, the same States reported 1,720 cases of this disease. Ninety-seven cities, situated in all parts of the country and having an aggregate population of more than 30,150,000, reported 921 cases of diphtheria for the week ended October 9, 1926. Last year for the corresponding week they reported 763 cases. The estimated expectancy for these cities was 1,017 cases The estimated expectancy is based on the experience of the last nine years, excluding epidemics

Measles—Thirty-two States reported 1,020 cases of measles for the week ended October 9, 1926, and 539 cases of this disease for the week ended October 10, 1925 Ninety-seven cities reported 180 cases of measles for the week this year, and 304 cases last year.

Poliomyelitis—The health officers of 35 States reported 88 cases of poliomyelitis for the week ended October 9, 1926. The same States reported 217 cases for the week ended October 10, 1925.

Scarlet fever—Scarlet fever was reported for the week as follows: Thirty-five States—this year, 1,773 cases; last year, 1,269 cases, 97 cities—this year, 646 cases; last year, 526 cases; estimated expectancy, 564 cases.

Smallpox.—For the week ended October 9, 1926, 35 States reported 123 cases of smallpox. Last year for the corresponding week they reported 97 cases. Ninety-seven cities reported smallpox for the week as follows: 1926, 15 cases; 1925, 30 cases; estimated expectancy, 29 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—One thousand and forty-eight cases of typhoid fever were reported for the week ended October 9, 1926, by 34 States. For the corresponding week of 1925, the same States reported 1,021 cases of this disease Ninety-seven cities reported 192 cases of typhoid fever for the week this year and 205 cases for the corresponding week last year. The estimated expectancy for these cities was 197 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 92 cities, with a population of more than 29,530,000, as follows; 1926, 382 deaths; 1925, 364 deaths.

City reports for week ended October 9, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
NEW ENGLAND									
Maine									
Portland	75,333	0	1	0	0	0	0	0	1
New Hampshire									
Concord	22,546	0	0	0	0	0	0	0	0
Manchester	83,097	0	4	0	0	0	0	0	1
Vermont									
Barre	10,008	1	0	0	0	0	0	0	0
Burlington	24,089	2	0	0	0	0	0	0	0
Massachusetts									
Boston	779,620	16	44	11	2	0	12	13	0
Fall River	128,993	0	4	3	1	0	0	9	1
Springfield	142,065	2	3	1	0	0	0	1	0
Worcester	190,757	1	6	2	0	0	0	0	5
Rhode Island									
Pawtucket	69,760	0	1	1	0	0	0	0	0
Providence	267,918	0	5	8	2	0	0	0	0
Connecticut									
Bridgeport	(1)	0	8	1	0	0	1	0	2
Hartford	160,197	0	6	1	0	0	0	0	0
New Haven	178,927	3	3	0	0	0	1	0	5
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	4	20	8	--------	0	0	0	6
New York	5,873,356	36	130	128	20	5	5	32	98
Rochester	316,786	4	9	1	--------	0	1	1	2
Syracuse	182,003	1	8	1	--------	0	1	0	2
New Jersey									
Camden	128,642	0	5	21	0	0	4	0	0
Newark	452,513	10	12	10	1	0	1	4	2
Trenton	132,020	0	5	1	0	0	1	0	4
Pennsylvania									
Philadelphia	1,979,364	21	56	50	--------	0	3	1	25
Pittsburgh	631,563	13	27	16	--------	1	7	1	13
Reading	112,707	1	3	2	--------	0	0	0	0
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	1	16	12	0	0	0	2	4
Cleveland	936,485	14	43	45	0	0	3	1	10
Columbus	279,836	1	7	10	0	0	0	1	2
Toledo	287,380	9	13	7	0	2	1	0	0
Indiana									
Fort Wayne	97,846	0	3	2	0	0	0	0	3
Indianapolis	358,819	3	14	24	0	0	0	1	5
South Bend	80,091	2	1	3	0	0	3	0	2
Terre Haute	71,071	0	2	1	0	0	0	0	2
Illinois									
Chicago	2,995,239	31	114	42	8	1	30	12	23
Peoria	81,564	0	1	0	0	0	7	3	1
Springfield	63,923	0	2	0	0	0	1	0	2
Michigan:									
Detroit	1,245,824	14	53	121	1	0	1	2	7
Flint	130,316	6	11	1	0	0	1	0	4
Grand Rapids	153,698	1	5	1	0	1	0	0	0

[1] No estimate made.

City reports for week ended October 9, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Wisconsin									
Kenosha	50,891	1	1	0	0	0	1	1	0
Madison	46,385	0	1	0	0	0	0	1	0
Milwaukee	509,192	6	20	11	1	1	2	13	15
Racine	67,707	4	2	1	0	0	1	0	0
Superior	39,671	0	0	2	0	0	0	0	0 22
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	2	3	1	0	0	6	0	2
Minneapolis	425,435	21	28	24	0	0	2	0	9
St Paul	246,001	9	18	8	0	1	3	0	9
Iowa									
Davenport	52,469	0	2	0	0	--------	2	0	--------
Des Moines	141,441	0	8	4	0	--------	0	0	--------
Sioux City	76,411	0	2	3	0	--------	1	0	--------
Waterloo	36,771	2	0	0	0	--------	0	0	--------
Missouri									
Kansas City	367,481	5	11	5	1	1	0	1	7
St Joseph	78,342	0	3	1	0	0	0	0	1
St Louis	821,543	4	39	40	1	1	1	1	--------
North Dakota									
Fargo	26,403	1	0	0	0	0	0	4	0
Grand Forks	14,811	0	0	0	0	--------	7	0	--------
South Dakota									
Aberdeen	15,036	0	0	0	0	--------	0	0	--------
Sioux Falls	30,127	0	0	2	0	0	0	0	0
Nebraska									
Lincoln	60,941	0	1	0	0	0	0	0	0
Omaha	211,768	1	14	5	0	0	0	0	2
Kansas									
Topeka	55,411	0	1	1	0	0	0	0	0
Wichita	88,367	1	2	0	0	0	0	0	0
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	0	2	0	0	0	0	0	1
Maryland									
Baltimore	796,296	10	23	13	4	0	1	1	8
Cumberland	33,741	0	0	2	1	0	1	0	2
Frederick	12,035	0	0	1	0	0	0	0	0
District of Columbia									
Washington	497,906	1	12	25	2	1	2	0	6
Virginia									
Lynchburg	30,395	0	1	1	0	0	1	0	0
Norfolk	(1)	0	3	3	0	0	0	2	1
Richmond	186,403	0	22	31	0	0	1	1	4
Roanoke	58,208	0	5	2	0	0	0	0	0
West Virginia									
Charleston	49,019	0	2	1	1	1	0	0	2
Huntington	63,485	0	4	4	0	0	0	0	2
Wheeling	56,208	1	3	0	0	0	1	0	0
North Carolina									
Raleigh	30,371	0	4	10	0	0	0	0	0
Wilmington	37,061	0	1	2	0	0	0	0	1
Winston-Salem	69,031	0	4	5	0	0	0	0	0
South Carolina									
Charleston	73,125	0	1	2	4	0	0	0	1
Columbia	41,225	0	3	1	0	0	0	0	0
Greenville	27,311	--------	1	--------	--------	--------	--------	--------	--------
Georgia									
Atlanta	(1)	0	8	14	10	1	1	1	4
Brunswick	16,809	0	0	0	0	0	0	0	0
Savannah	93,134	0	[illegible]	0	0	0	0	0	1
Florida									
Miami	69,754	0	--------	6	0	0	4	1	5
St Petersburg	26,847	--------	0	--------	--------	0	--------	--------	0
Tampa	94,743	--------	1	--------	--------	--------	--------	--------	--------

[1] No estimate made.

City reports for week ended October 9, 1926—Continued

Division, State, and city	Population July 1, 1925 estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309		2						
Louisville	305,935	1	11	0	0	0	0	0	6
Tennessee									
Memphis	174,533	0	10	8	0	1	0	1	4
Nashville	136,220	0	4	27	0	0	0	0	1
Alabama									
Birmingham	205,670	0	7	0	2	0	1	0	3
Mobile	65,955	0	2	0	0	0	0	0	0
Montgomery	46,481	0	2	9	0	0	0	2	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	2	2	0		0	0	
Little Rock	74,216		2						
Louisiana									
New Orleans	414,493	0	9	1	6	0	0	0	5
Shreveport	57,857	0	0	0	0	0	0	0	2
Oklahoma									
Oklahoma City	(1)	1	2	2	10	0	0	0	5
Texas									
Dallas	194,450	0	7	27	5	2	0	20	4
Galveston	48,375	0	0	0	0	0	0	0	2
Houston	164,954	0	3	8	0	1	0	0	2
San Antonio	198,069	0	1	3	0	0	0	0	5
MOUNTAIN									
Montana									
Billings	17,971	2	0	0	0	0	1	0	0
Great Falls	29,883	5	1	0	0	0	0	0	0
Helena	12,037	0	0	0	0	0	0	0	1
Missoula	12,668	5	0	1	0	0	0	0	0
Idaho									
Boise	23,042	0	1	1	0	0	0	3	0
Colorado									
Denver	280,911	1	14	9		2	2	1	3
Pueblo	43,787	0	5	0	0	0	0	0	1
New Mexico									
Albuquerque	21,000	0	1	0	0	0	0	0	0
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	1
Utah									
Salt Lake City	130,948	12	4	8	0	0	8	1	0
Nevada									
Reno	12,665	0	0	0	0	0	1	0	1
PACIFIC									
Washington									
Seattle	(1)	12	7	11	0		1	5	
Spokane	108,897	13	4	2	0		1	0	
Tacoma	104,455	6	3	16	0	0	0	0	0
Oregon									
Portland	282,383	2	7	9	1	0	2	2	4
California									
Los Angeles	(1)	10	34	21	5	0	1	4	11
Sacramento	72,260	2	2	6	0	0	14	0	1
San Francisco	557,530	19	16	18	1	0	50	7	3

[1] No estimate made

City reports for week ended October 9, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	1	0	0	0	0	0	1	0	0	11	17
New Hampshire											
Concord	0	4	0	0	0	0	0	0	0	0	7
Manchester	1	1	0	0	0	1	0	0	0	0	22
Vermont											
Barre	0	0	0	0	0	0	0	0	0	1	1
Burlington	1	0	0	0	0	0	0	0	0	0	6
Massachusetts											
Boston	22	39	0	0	0	13	4	3	10	18	212
Fall River	1	0	0	0	0	1	2	3	0	1	25
Springfield	4	0	0	0	0	2	0	0	0	2	26
Worcester	6	13	0	0	0	4	0	0	0	3	60
Rhode Island											
Pawtucket	0	0	0	0	0	0	0	0	0	0	19
Providence	3	2	0	0	0	3	2	0	0	7	45
Connecticut											
Bridgeport	3	1	0	0	0	2	0	0	0	0	31
Hartford	2	2	0	0	0	2	2	0	0	2	35
New Haven	3	0	0	0	0	1	3	1	0	4	39
MIDDLE ATLANTIC											
New York											
Buffalo	11	2	0	0	0	5	3	1	0	8	129
New York	51	59	0	0	0	[1] 77	33	35	1	57	1,158
Rochester	5	0	1	0	0	4	1	1	0	6	71
Syracuse	6	2	0	1	0	3	2	0	0	16	44
New Jersey											
Camden	2	5	0	0	0	0	1	0	0	5	35
Newark	7	3	0	0	0	8	3	1	0	40	101
Trenton	1	0	0	0	0	4	1	1	0	2	36
Pennsylvania											
Philadelphia	34	36	1	0	0	30	13	7	1	36	438
Pittsburgh	25	5	0	0	0	7	4	7	3	9	135
Reading	1	3	0	0	0	0	1	1	0	6	17
EAST NORTH CENTRAL											
Ohio											
Cincinnati	8	7	1	0	0	9	2	5	0	3	141
Cleveland	18	14	1	0	0	13	4	8	0	16	177
Columbus	6	6	1	0	0	3	2	3	1	0	72
Toledo	8	10	0	0	0	4	2	2	3	17	60
Indiana											
Fort Wayne	1	0	0	0	0	0	1	1	1	0	25
Indianapolis	6	13	1	0	0	7	2	2	1	5	92
South Bend	1	4	0	0	0	2	0	3	0	0	12
Terre Haute	1	5	0	0	0	0	1	0	0	0	13
Illinois											
Chicago	62	47	1	0	0	41	7	5	2	38	607
Peoria	10	2	0	0	0	0	0	0	1	6	24
Springfield	1	1	0	0	0	1	2	0	0	0	26
Michigan											
Detroit	43	41	2	2	0	17	6	3	0	37	256
Flint	6	12	0	0	0	0	1	0	0	2	30
Grand Rapids	6	5	1	0	0	2	1	2	0	2	36
Wisconsin											
Kenosha	1	0	0	0	0	0	0	0	0	13	7
Madison	0	2	0	0	0	0	0	0	0	4	------
Milwaukee	17	20	2	0	0	4	1	2	0	37	98
Racine	3	1	1	0	0	1	0	0	0	0	10
Superior	1	0	0	0	0	0	1	0	0	0	5
WEST NORTH CENTRAL											
Minnesota											
Duluth	5	9	0	0	0	0	1	0	0	1	24
Minneapolis	24	30	1	0	0	4	1	0	0	1	105
St. Paul	12	19	3	0	0	3	1	1	0	15	54

[1] Pulmonary tuberculosis only.

City reports for week ended October 9, 1926—Continued

Division, state, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL—continued											
Iowa											
Davenport	0	1	0	0			0	0		0	
Des Moines	6	0	1	0			0	0		0	
Sioux City	1	2	0	0			0	0		2	
Waterloo	2	0	0	0			0	0		2	
Missouri											
Kansas City	7	4	0	1	0	2	3	1	0	4	108
St. Joseph	3	3	0	0	0	2	1	0	0	1	22
St. Louis	23	16	0	0	0	8	5	4	0	7	174
North Dakota											
Fargo	1	6	0	0	0	0	0	0	0	0	1
Grand Forks	0	2	0	0			0	1		0	
South Dakota											
Aberdeen	1	6	0	0			0	0		0	
Sioux Falls	1	1	0	0	0	0	0	0	0	0	
Nebraska											
Lincoln	1	5	1	0	0	0	0	0	0	0	16
Omaha	3	14	1	0	0	2	1	2	0	0	
Kansas											
Topeka	2	1	0	0	0	1	1	3	0	1	14
Wichita	2	3	0	0	0	1	1	0	0	1	23
SOUTH ATLANTIC											
Delaware											
Wilmington	2	0	0	0	0	1	1	0	0	0	23
Maryland											
Baltimore	9	5	0	0	0	9	10	8	1	67	185
Cumberland	0	0	0	0	0	0	0	0	0	0	12
Frederick	1	1	0	0	0	0	1	0	0	0	2
District of Columbia											
Washington	9	10	0	0	0	12	4	3	1	3	125
Virginia											
Lynchburg	1	3	0	0	0	0	1	2	0	3	9
Norfolk	1	2	0	0	0	1	1	2	0	1	
Richmond	6	5	0	0	0	1	2	1	0	0	51
Roanoke	2	2	0	0	0	0	2	0	0	2	12
West Virginia											
Charleston	1	5	0	0	0	1	2	1	1	2	14
Huntington	1	4	0	0	0	1	1	0	1	0	12
Wheeling	4	1	0	0	0	3	2	3	0	0	18
North Carolina											
Raleigh	2	2	0	0	0	0	0	1	0	1	16
Wilmington	1	0	0	0	0	0	0	2	0	3	10
Winston-Salem	2	6	1	0	0	1	1	5	0	2	13
South Carolina											
Charleston	0	0	0	0	0	2	2	5	0	0	19
Columbia	0	1	0	0	0	0	1	0	0	0	
Greenville	1		0				0				
Georgia:											
Atlanta	5	9	1	0	0	0	2	5	2	5	59
Brunswick	0	0	0	0	0	1	0	0	0	0	5
Savannah	1	0	0	0	0	3	1	0	0	0	15
Florida											
Miami		1		0	0	1		1	0	0	40
St. Petersburg	0		0		0	0	0		0		12
Tampa	0		0				0				
EAST SOUTH CENTRAL											
Kentucky											
Covington	1		0				0				
Louisville	3	8	0	0	0	11	5	8	0	4	76
Tennessee											
Memphis	3	12	0	2	0	4	4	5	6	5	77
Nashville	4	6	0	0	0	1	3	14	2	10	38
Alabama											
Birmingham	5	0	1	0	0	2	1	1	0	1	48
Mobile	1	0	0	0	0	1	0	0	0	0	17
Montgomery	1	1	0	0	0	0	0	0	0	0	20

City reports for week ended October 9, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	1	0	0	--------	------	0	0	--------	0	--------
Little Rock	2	-------	0	-------	--------	------	1	-------	--------	--------	-------
Louisiana											
New Orleans	3	1	0	0	0	16	4	1	0	1	128
Shreveport	0	0	0	0	0	1	1	0	0	0	23
Oklahoma											
Oklahoma City	1	1	0	0	0	2	2	0	0	0	31
Texas											
Dallas	3	10	0	0	0	5	2	3	3	0	50
Galveston	0	0	0	0	0	1	1	0	0	0	10
Houston	0	1	0	0	0	2	0	0	0	0	40
San Antonio	0	1	0	1	0	5	0	1	0	0	40
MOUNTAIN											
Montana											
Billings	0	0	0	0	0	0	0	0	0	0	4
Great Falls	0	1	0	0	0	1	0	1	0	0	6
Helena	0	0	0	0	0	0	0	0	0	0	4
Missoula	0	14	0	0	0	0	0	0	0	0	6
Idaho											
Boise	0	1	0	0	0	0	0	0	0	0	5
Colorado											
Denver	5	14	1	0	0	10	3	1	0	1	71
Pueblo	0	0	0	0	0	1	1	2	0	0	10
New Mexico											
Albuquerque	0	0	0	0	0	3	2	0	0	0	16
Arizona											
Phoenix	0	0	0	0	0	7	0	0	0	0	21
Utah											
Salt Lake City	2	3	0	1	0	3	3	3	0	3	27
Nevada											
Reno	1	0	0	0	0	0	0	0	0	0	4
PACIFIC											
Washington											
Seattle	7	18	1	1	-------	----	2	3	--------	1	--------
Spokane	6	5	1	0	-------	-----	1	2	--------	0	--------
Tacoma	2	4	0	4	0	0	1	0	0	0	17
Oregon											
Portland	5	21	2	2	0	4	3	0	1	0	66
California											
Los Angeles	10	19	3	2	0	17	5	1	0	9	214
Sacramento	1	1	1	0	0	2	1	1	0	0	22
San Francisco	6	12	1	0	0	10	1	1	0	9	141

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis (infantile paralysis): Cases	Poliomyelitis (infantile paralysis): Deaths
NEW ENGLAND [1]									
Massachusetts									
Boston	1	1	1	0	0	0	2	1	0
Springfield	0	0	0	0	0	0	0	1	1
Worcester	1	0	0	0	3	0	0	1	0
Rhode Island									
Providence	0	0	0	1	0	0	0	0	0
MIDDLE ATLANTIC									
New York									
Buffalo	0	0	0	0	0	0	0	0	1
New York	2	1	4	5	0	0	14	5	1
New Jersey									
Newark	0	0	3	0	0	0	0	0	0

[1] Typhus fever: 2 cases at Hartford, Conn., 1 case at Davenport, Iowa, and 1 case at Memphis, Tenn.

City reports for week ended October 9, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio									
Cleveland	0	0	0	0	0	0	0	3	1
Toledo	0	0	0	0	0	0	0	1	0
Indiana									
Indianapolis	0	1	0	0	0	0	0	0	0
Illinois									
Chicago	0	0	2	1	0	0	5	1	0
Michigan									
Detroit	1	1	0	0	1	0	1	4	1
Grand Rapids	0	0	0	0	0	0	0	1	0
WEST NORTH CENTRAL [1]									
Missouri									
St Louis	0	0	0	0	0	0	1	1	1
SOUTH ATLANTIC [2]									
Maryland									
Baltimore	1	1	1	0	0	1	1	2	0
Georgia									
Atlanta	0	0	0	0	2	0	0	0	0
Florida									
St Petersburg	0	1	0	0	0	0	0	0	0
EAST SOUTH CENTRAL									
Kentucky									
Louisville	1	0	0	0	0	0	0	0	0
Tennessee									
Memphis [1]	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL									
Louisiana									
New Orleans	0	0	0	0	3	3	0	0	0
Oklahoma									
Oklahoma City	0	0	0	0	0	1	0	0	0
Texas									
Dallas	0	0	0	0	2	0	0	0	0
PACIFIC									
Washington									
Spokane	2	0	0	0	0	0	0	0	0
Oregon									
Portland	1	1	0	0	0	0	0	3	1
California									
Los Angeles	0	0	0	0	0	0	0	1	0
Sacramento	1	0	0	0	0	0	1	0	0
San Francisco	1	0	0	0	0	0	0	0	0

[1] Typhus fever 2 cases at Hartford, Conn, 1 case at Davenport, Iowa, and 1 case at Memphis, Tenn
[2] Dengue 2 cases at Charleston S C.

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended October 9, 1926, compared with those for a like period ended October 10, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than

29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, September 5 to October 9, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Sept. 12, 1925	Sept. 11, 1926	Sept. 19, 1925	Sept. 18, 1926	Sept. 26, 1925	Sept. 25, 1926	Oct. 3, 1925	Oct. 2, 1926	Oct. 10, 1925	Oct. 9, 1926
101 cities	92	76	[2] 95	84	[2] 97	107	[3] 115	[3] 128	134	[4] 159
New England	74	38	139	35	81	73	74	66	96	66
Middle Atlantic	89	53	83	63	81	70	84	81	114	118
East North Central	70	80	76	95	101	128	[3] 130	[3] 135	153	188
West North Central	143	75	145	95	153	127	192	143	198	177
South Atlantic	119	137	88	111	109	128	207	163	179	[5] 224
East South Central	74	104	74	109	58	135	63	270	89	[6] 242
West South Central	119	86	57	77	75	69	62	211	79	[7] 188
Mountain	194	173	[2] 217	237	[2] 189	137	129	291	194	173
Pacific	75	92	130	100	102	213	102	175	102	200

MEASLES CASE RATES

101 cities	22	26	[2] 29	28	[2] 35	37	[3] 39	[3] 36	53	[4] 31
New England	91	35	108	19	177	38	242	21	371	33
Middle Atlantic	25	11	34	10	33	9	35	10	47	11
East North Central	16	18	22	23	22	22	[3] 24	[3] 24	24	29
West North Central	4	10	8	12	6	28	6	10	6	26
South Atlantic	21	19	15	9	29	11	23	13	15	[5] 16
East South Central	0	16	5	16	11	10	11	5	11	[6] 6
West South Central	4	4	4	4	0	0	0	0	0	[7] 0
Mountain	9	100	[2] 9	73	[2] 28	118	9	109	37	109
Pacific	8	159	14	213	19	310	3	329	11	181

SCARLET FEVER CASE RATES

101 cities	51	58	[2] 60	66	[2] 63	79	[3] 86	[3] 100	92	[4] 112
New England	62	80	60	76	46	71	86	104	105	144
Middle Atlantic	31	32	46	44	48	56	62	51	65	57
East North Central	57	62	58	64	65	80	[3] 96	[3] 99	109	121
West North Central	102	93	133	129	135	153	176	197	119	215
South Atlantic	54	56	36	49	61	79	67	111	92	[5] 103
East South Central	110	109	53	119	74	83	74	99	121	[6] 149
West South Central	31	47	40	30	13	52	48	69	62	[7] 64
Mountain	37	73	[2] 161	82	[2] 85	118	176	319	148	300
Pacific	36	89	64	119	77	119	88	175	102	159

SMALLPOX CASE RATES

101 cities	5	2	[2] 6	2	[2] 5	3	[3] 2	[3] 1	5	[4] 3
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	1	0	0	0	0
East North Central	2	2	2	0	2	1	[3] 0	[3] 0	1	1
West North Central	0	2	2	0	2	2	2	2	10	2
South Atlantic	12	2	12	9	6	6	0	4	6	[5] 0
East South Central	21	0	37	0	32	0	0	0	16	[6] 11
West South Central	4	0	4	4	0	13	0	0	0	[7] 5
Mountain	18	0	[2] 0	0	[2] 38	0	9	9	9	9
Pacific	41	16	47	19	39	19	25	5	44	19

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively

[2] Helena, Mont., not included.

[3] Superior, Wis., not included

[4] Greenville, S. C., Tampa, Fla., Covington, Ky., and Little Rock, Ark., not included.

[5] Greenville, S. C., and Tampa, Fla., not included.

[6] Covington, Ky., not included

[7] Little Rock, Ark., not included

Summary of weekly reports from cities, September 5 to October 9, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926
101 cities	41	45	[2] 49	53	[2] 44	44	[3] 39	[3] 42	36	[4] 33
New England	34	17	29	33	22	9	46	17	26	17
Middle Atlantic	27	34	35	55	34	45	32	28	31	27
East North Central	20	20	18	29	29	26	[3] 20	[3] 34	21	23
West North Central	57	50	57	26	16	26	35	40	33	22
South Atlantic	48	105	104	81	58	92	50	115	52	[5] 75
East South Central	226	285	194	249	200	166	131	130	163	[6] 154
West South Central	70	39	159	69	97	77	92	47	57	[7] 23
Mountain	129	18	[2] 85	82	[2] 94	36	111	82	120	64
Pacific	28	27	28	35	22	22	28	19	8	22

INFLUENZA DEATH RATES

	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926
95 cities	4	4	[2] 5	4	[2] 3	6	[3] 5	[3] 6	3	[8] 4
New England	2	0	0	0	0	5	0	2	0	0
Middle Atlantic	3	4	6	3	3	3	3	2	3	3
East North Central	7	4	4	3	4	3	[3] 6	[3] 5	3	2
West North Central	0	0	6	4	4	8	6	0	4	6
South Atlantic	0	0	2	6	2	9	4	9	2	[5] 6
East South Central	5	0	5	5	0	10	16	10	0	[6] 6
West South Central	5	19	10	24	0	24	19	38	15	14
Mountain	28	36	[2] 19	0	[2] 9	9	0	18	9	18
Pacific	4	0	0	7	4	7	0	7	0	0

PNEUMONIA DEATH RATES

	Sept 12, 1925	Sept 11, 1926	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926
95 cities	61	51	[2] 60	53	[2] 54	65	[3] 61	69	63	[8] 64
New England	50	40	67	54	53	76	31	87	58	33
Middle Atlantic	68	65	61	51	66	70	68	71	63	76
East North Central	46	37	44	40	39	45	[3] 44	[3] 58	61	54
West North Central	36	30	45	51	26	55	36	70	45	63
South Atlantic	60	41	81	54	86	79	81	66	71	[5] 61
East South Central	142	42	79	52	42	88	100	109	110	[6] 77
West South Central	82	104	77	123	48	99	63	71	63	94
Mountain	37	64	[2] 113	118	[2] 76	55	139	155	92	55
Pacific	91	57	62	53	51	78	87	28	51	53

[2] Helena, Mont , not included
[3] Superior, Wis , not included
[4] Greenville, S C , Tampa, Fla , Covington, Ky , and Little Rock, Ark., not included.
[5] Greenville, S C , and Tampa, Fla , not included
[6] Covington, Ky , not included
[7] Little Rock, Ark , not included
[8] Greenville, S C , Tampa, Fla , and Covington, Ky., not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Reports for week ended October 2, 1926.—The following report for the week ended October 2, 1926, was transmitted by the Far Eastern Bureau of the Secretariat of the Health Section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt: Alexandria	0	0	0	0	1	0
Zanzibar: Zanzibar	0	0	0	0	1	0
British India:						
Karachi	....	0	....	0	1	1
Bombay	....	3	....	0	3	1
Madras	....	0	....	0	2	3
Rangoon	....	3	....	0	0	0
Negapatam	....	0	....	0	6	1
Ceylon: Colombo	0	0	0	0	3	0
Dutch East Indies:						
Cheribon	0	0	0	0	0	5
Siam: Bangkok	0	0	0	0	3	0
China:						
Amoy	0	0	23	....	0	0
Shanghai	0	0	22	9	0	0
Manchuria: Antung	0	0	2	1	0	0
U. S. S. R.: Vladivostok	0	0	0	0	1	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia.—Aden, Jeddah.
Iraq.—Basra.
Persia.—Mohammerah, Bender Abbas, Bushire.
British India.—Chittagong, Cochin, Vizagapatam, Tuticorin.
Federated Malay States.—Port Swettenham.
Straits Settlements.—Singapore, Penang.
Dutch East Indies.—Batavia, Surabaya, Samarang, Belawan Deli, Palembang, Sabang, Makassar, Banjermasin, Tarakan, Padang Balik-Papan, Samarinda, Pontianak, Menado.
Sarawak.—Kuching.
British North Borneo.—Sandakan, Jasselton, Kudat, Tawao.
Portuguese Timor.—Dilly.
Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.
French Indo-China.—Saigon and Cholon, Turane, Haiphong.
China.—Hong-Kong.
Formosa.—Keelung.
Japan.—Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki.
Korea.—Chemulpo, Fusan.
Manchuria.—Mukden, Changchun, Harbin.
Kwantung.—Port Arthur, Dairen.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Garnarvon, Thursday Island.
New Guinea.—Port Moresby.
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia.—Noumea.
Fiji.—Suva.
Hawaii.—Honolulu.
Society Islands.—Papeete.

AFRICA

Egypt.—Port Said, Suez.
Anglo-Egyptian Sudan.—Port Sudan, Suakin.
Eritrea.—Massaua.
French Somaliland.—Jibuti.
British Somaliland.—Berbera.
Italian Somaliland.—Mogadiscio.
Kenya.—Mombasa.
Tanganyika.—Dar-es-Salaam.
Seychelles.—Victoria.
Mauritius.—Port Louis.
Portuguese East Africa.—Mozambique, Beira, Lorenço-Marques.
Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

British India.—Calcutta.
Madagascar.—Tamatave, Majunga.

ALGERIA

Plague.—Oran—Information dated October 1, 1926, shows the occurrence of five cases of plague with one death at Oran, Algeria.

BOLIVIA

Communicable diseases—La Paz—*August, 1926*.—During the month of August, 1926, communicable diseases were reported at La Paz, Bolivia, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cerebrospinal meningitis		1	Scarlet fever		7
Diphtheria	8	6	Smallpox	14	4
Dysentery	34	6	Tuberculosis	18	9
Influenza	38	12	Typhoid fever	15	3
Measles	12	2	Typhus fever	9	1
Pneumonia	20	8	Whooping cough	16	4
Poliomyelitis	5	1			

Population, estimated, 100,000.

CANADA

Communicable diseases—Weeks ended October 2, and 9, 1926—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the weeks ended October 2, and 9, 1926, as follows:

WEEK ENDED OCTOBER 2

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal meningitis				1				1
Influenza	7							7
Lethargic encephalitis				2				2
Poliomyelitis				5				5
Smallpox				2		1	15	18
Typhoid fever	3	5	57	23	5		1	94

WEEK ENDED OCTOBER 9

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal meningitis				2				2
Influenza	12							12
Lethargic encephalitis				2				2
Poliomyelitis				13	1			14
Smallpox				2		13	14	29
Typhoid fever	3	9	10	19	3	6	2	52

Chosen

Cholera—Shingishu and vicinity—Precautions against spread of infection.—Cholera has been reported present in Shingishu and vicinity, Chosen, the first case having been notified September 9, 1926. Under date of September 13, it was stated that a Government order had been issued declaring a definite area along the Yalu River between Shingishu and Antung to be cholera infected and requiring strict enforcement of quarantine within that area. It was stated that preventive measures were being observed at open ports and that foot and railway travel from Antung had been made subject to medical inspection for all persons suspected of cholera infection.

CZECHOSLOVAKIA

Communicable diseases—August, 1926.—During the month of August, 1926, communicable diseases were reported in the Republic of Czechoslovakia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	4		Puerperal fever	34	15
Cerebrospinal meningitis	14	5	Rabies	2	2
Diphtheria	267	28	Scarlet fever	706	13
Dysentery	206	7	Trachoma	142	
Malaria	66		Typhoid fever	844	46
Paratyphoid fever	3				

ECUADOR

Plague—Guayaquil—September 1-30, 1926.—During the month of September, 1926, four cases of plague were reported at Guayaquil, Ecuador

Plague-infected rats.—During the same period, of 21,223 rats taken at Guayaquil, 30 rats were found plague infected.

ESTHONIA

Communicable diseases—August, 1926.—During the month of August, 1926, communicable diseases were reported in the Republic of Esthonia as follows:

Disease	Cases	Disease	Cases
Diphtheria	19	Scarlet fever	110
Leprosy	2	Tuberculosis	157
Measles	73	Typhoid fever	38
Paratyphoid fever	16		

Population, census of 1922, 1,107,059

GERMANY

Typhoid fever epidemic—Hanover—September, 1926.—Information dated September 18, 1926, received from Bremen, Germany, shows epidemic typhoid fever prevalence in the city of Hanover, Germany, in September, 1926, with 10 cases reported September 8, 60 cases September 9, and on September 10, 150 cases received at the city hospital. The number of cases was then stated to be increasing at a rate of about 150 per day, with a total of 1,504 cases under treatment and 42 fatalities to September 17.

The cause of the outbreak had not been determined. Free inoculation stations were established, and about 10,000 voluntary inoculations were reported.

SIAM

Quarantine against ports in Indo-China suspended.—Quarantine measures against arrivals from Saigon and Cholon, Indo-China, at ports in Siam, were removed by quarantine circular dated August 23, 1926.

SYRIA

Plague—Beirut—October 15, 1926.—Plague was reported present at Beirut, Syria, October 15, 1926.

VIRGIN ISLANDS

Communicable diseases—September, 1926—During the month of September, 1926, communicable diseases were reported in the Virgin Islands of the United States as follows:

Island and disease	Cases	Remarks
St Thomas and St John		
Chancroid	5	Imported, 1
Fish poisoning	3	
Gonorrhea	12	Imported, 1
Syphilis	13	Imported, 2 Secondary, 9
Tuberculosis	2	Chronic pulmonary
Uncinariasis	1	Necator americanus
St Croix:		
Chancroid	3	
Pellagra	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended October 29, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Amoy	Sept 5-18	103		
Foochow	Sept 12-18			Present
Kulangsu	do		2	Including international settlement
Swatow	do			Sporadic
Chosen				Area on Yalu River between Antung and Shingishu declared cholera infected Sept 13, 1926
India				Aug 8-21, 1926 Cases, 4,756, deaths, 3,185.
Bombay	Aug 22-28	1	1	
Calcutta	Aug 29-Sept 4	14	13	
Madras	Sept 12-18	2	1	
Rangoon	Aug 29-Sept 4	1	1	
Japan				
Tohoku	Sept 1-10	2		One of these in Chinese from Foochow.
Philippine Islands				
Manila	Sept 5-11	4	1	
Siam				Aug 29-Sept 4, 1926 Cases, 32, deaths, 17 Apr 1-Sept 4, 1926 Cases, 7,554, deaths, 4,953
Bangkok	Aug 29-Sept 4	3		District

PLAGUE

Place	Date	Cases	Deaths	Remarks
China				
Nanking	Aug 29-Sept 18			Present.
Ecuador				
Guayaquil	Sept 1-30	4		Rats taken, 21,223, found plague infected, 30.
India				Aug 8-21, 1926 Cases, 840, deaths, 505.
Madras Presidency	Aug. 15-28	190	69	
Rangoon	Aug 29-Sept. 4	17	14	
Java.				
Batavia	Aug 22-Sept 11	20	20	District.
Surabaya	Aug. 22-28	17	2	
Mauritius.				
Port Louis	July 1-31	1	1	
Siam				Aug. 29-Sept. 4, 1926: Cases, 15, deaths, 10
Syria.				
Beirut	Oct. 15			Present.
Turkey				
Constantinople	Sept 19-25	2	2	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended October 29, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Bolivia				
La Paz	Aug 1-31	14	4	
Brazil				
Port Alegre	Aug 10-31	2		
Canada				
Alberta	Sept 26-Oct 9	29		
Calgary	do	10		
Ontario	do	4		
Toronto	Oct 3-9	3		
Saskatchewan	Sept 26-Oct 2	14		
China				
Chungking	Aug 29-Sept 4			Present
Foochow	Sept 5-18			Present
Nanking	Aug 8-Sept 18			Present
Swatow	Sept 5-18			Sporadic
Great Britain				
England and Wales				Sept 19-25, 1926, Cases, 121
Birmingham	Sept 26-Oct 2	1		
Sheffield	Sept 26-Oct 2	6		
India				Aug 8-21, 1926 Cases, 2,403, deaths 979
Bombay	Aug 22-Sept 4	11	7	
Madras	Sept 5-18	10	1	
Rangoon	Aug 29-Sept 4	17	4	
Java				
Batavia	Aug 22-28	2		Province
Surabaya	Aug 15-28	31	2	
Mexico				
Mexico City	Sept 19-25	2		Including municipalities in Federal District
Siam				Aug 29-Sept 4, 1926 Cases, 6, deaths, 5 Apr 1-Sept 4, 1926 Cases, 557, deaths, 218
Bangkok	Aug 29-Sept 4	5	3	
Union of South Africa				
Transvaal	do	1		Native
Johannesburg	do	1		

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Bolivia:				
La Paz	Aug 1-31	9	1	
Chile				
Valparaiso	Sept. 12-18	2		
China:				
Chunkging	Aug 29-Sept 4			Present.
Palestine				Sept 7-13, 1926 Cases, 2, in two localities
Jerusalem	Sept 14-20	1		
Union of South Africa				
Transvaal—				
Johannesburg	Aug 29-Sept 4	1		

Reports Received from June 26 to October 22, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926: Cases, 31, deaths, 29
China				
Amoy	Aug 8-Sept 4	67		Stated to be present in epidemic form
Canton	June 1-30	38	14	
Do	July 15-31	54	28	

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 22, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued.				
Foochow	Aug 15-Sept 4			Present
Manchuria:				
Dairen	Aug 23-29	1	1	
Nanking	July 25-Aug 7			Do
Shanghai	Reported July 20	35	8	
Do	July 25-Sept 11	34	366	Cases, foreign, deaths, native and foreign
Swatow	July 11-Sept 4	36	63	
Tsingtao	July 11-Aug 30	4	4	Japanese settlements, 10 deaths, Chinese 30 to 4 deaths daily, estimated
Chosen				
North Heian Province	Sept 3-16	70	30	Deaths estimated
Shingishu	Sept 13	19		Including places in vicinity
French Settlements in India				Mar 7-June 26, 1926 Cases, 31, deaths, 30
India				Apr 25-June 26 1926 Cases, 18,526, deaths, 11,531 June 27-Aug 7, 1926 Cases, 11,492, deaths, 7,164
Bombay	May 30-June 5	1	1	
Do	July 18-31	2	2	
Calcutta	Apr 4-May 29	478	118	
Do	June 13-26	73	69	
Do	June 27-Aug 28	254	225	
Madras	May 16-June 5	2	1	
Do	Aug 1-Sept 4	2	2	
Rangoon	May 9-June 26	67	44	
Do	June 27-Aug 28	30	28	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug 14	31	17	
Japan				To Sept 10, 1926 Cases, 35
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Wakayama	do	2		
Philippine Islands				
Manila	May 18-24	2	2	
Do	June 27-Aug 21	9	2	
Provinces—				
Albay	Apr 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb 21-Mar 6	3	3	
Pampanga	July 25-31	1	1	
Rizal	July 18-24	1		
Romblon	Dec 14-31	42	43	
Do	Jan 2-Mar 27	41	35	
Siam				Aug 1-28, 1926 Cases, 186, deaths, 129.
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-Aug. 28	79	28	
Straits Settlements.				
Singapore	July 4-17	2	1	
On vessel				
Steamship Macedonia	Aug 5	1		At Yokohama, Japan Vessel sailed from Singapore, July 18, 1926

PLAGUE

Algeria:				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported.
Do	July 1-20	1		
Bona	Aug. 14	1		
Philippeville	Sept. 7	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 22, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Azores				
Fayal Island—				
Horta	Aug 2-29	2	2	
St Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	
Brazil				
Piranagua	Oct 8			Present
British East Africa				
Kisumu	May 16-22	1	1	
Do	Aug 17-Sept 11	3	2	
Uganda	Mar 1-June 30	732	574	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	
China				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug 7	28		
Foochow	June 6-July 31			Several cases Not epidemic
Nanking	May 9-Aug 7			Prevalent
Swatow	July 25-31	14		
Ecuador				January-June, 1926 Cases, 385, deaths, 154
Chimborazo	January-June	9	2	Rats taken, 766
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1-Aug 31	12	3	Rats taken, 41,321, found infected, 59
Leon	January-June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1,542
Egypt				Jan 1-Sept 9, 1926 Cases, 128.
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkiah	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
Sidi Barani	Sept 30	12		In western desert.
France				
Marseille	July 8	1	1	Reported July 24.
St Denis	Reported Aug 2	1		Vicinity of Paris.
St Ouen	Aug 14	2		Suburb of Paris.
Great Britain				
Liverpool	Aug 29-Sept 4	2	1	
Greece				
Athens	Apr 1-May 31	16	4	Including Piræus
Do	Aug 1-31	9	2	Do.
Patras	May 27-June 12	4	1	
Do	July 25-Sept 4	7	4	
Zante	May 17	1		
Hawaii				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Paauhau	July 18-24			Plague-infected rat trapped
India				Apr 25-June 16, 1926. Cases, 53 001, deaths, 41,576. June 27-Aug. 7, 1926. Cases, 1,405; deaths, 861
Bombay	May 2-June 26	16	15	
Do	July 18-Aug 21	5	5	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	182	93	
Do	July 4-Aug 14	264	139	
Rangoon	May 9-June 26	20	15	
Do	June 27-Aug 28	39	30	
Indo-China.				
Saigon	May 23-June 26	8	8	
Do	July 18-Aug 7	2	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 22, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Iraq				
Baghdad	Apr 18-June 12	161	108	
Do	July 18-31	2	2	
Japan				
Yokohama	July 2-30	9	5	
Do	Aug 7	2		Total, July 2-Aug 10, 1926 Cases, 9, deaths, 8.
Java				
Batavia	Apr 24-June 19	65	65	
Do	June 26-Aug 20	44	42	
Cheribon	Apr 11-24	3	3	
East Java and Madoera	June 13-19	1	1	
Do	July 25-31	1	1	
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic.
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Majunga Province	do	10	6	
Mananjary Province	do	1	1	
Moramanga Province	Apr 1-15	2	2	Do
Tananarive Province				Apr 1-June 30, 1926 Cases, 130, deaths, 120
Tamatave (Port)	May 16-31	1	1	
Tananarive Town	Apr. 1-June 30	7	7	
Nigeria				Feb 1-Apr 30, 1926 Cases, 115, deaths, 92
Peru				May-June, 1926 Cases, 57, deaths, 16 July 1-Aug 31, 1926 Cases, 44, deaths, 16.
Departments—				
Ancash	May 1-31			Present
Do	July 1-31	2		
Cajamarca	May 1-June 30	10	4	
Do	Aug 1-31	1		
Ica	May 1-31	1		
Do	July 1-31	1		
Libertad	May 1-31	4		
Lima	May 1-June 30	29	12	
Do	July 1-Aug 30	40	16	
Piura	June 1-30	13		
Russia				Jan 1-Mar 31, 1926 Cases, 37
Senegal				Nov 1-30, 1925 Cases, 3, deaths, 2 Mar 1-Apr 30, 1926 Cases, 15, deaths, 4
Siam				Apr 1-Aug 28, 1926 Cases, 15, deaths, 10.
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Do	July 4-17	1	1	
Syria				
Beirut	July 1-Aug 10	2		
Tunisia	May 11-June 30	174		
Do	July 1-20	12		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan.
Turkey.				
Constantinople	Aug. 1-Sept. 4	5	2	
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug 21	4	3	
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District	Aug. 15-21	1		
Protestpan	May 9-22	3	3	
On vessel:				
Steamship Zaria	September, 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa. 29 plague-infected rats found on board.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 22, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 20	14		
Do	July 1-Aug 31	3		
Belgium				
Antwerp	Aug. 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-31	2	4	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Sept 11	63	36	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27—Aug 14	18	11	
Pernambuco	July 11-Aug 28	70	10	
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 18	2,230	1,135	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Canada				May 30-June 12, 1926 Cases, 46.
Alberta	May 30-June 12	3		
Do	June 27-Sept 25	18		
Calgary	Sept 5-25	6		
British Columbia—				
Vancouver	Aug 16-Sept 12	3		
Manitoba				May 30-June 26, 9126 Cases, 15. June 27-Sept 25, 1926 Cases, 19.
Winnipeg	June 6-12	5		
Do	July 4-Sept 4	12		
Ontario				May 30-June 26, 1926 Cases, 36 June 27-Sept. 30: Cases, 78.
Fort William	July 25—Aug. 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2		
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Peterboro	Sept 1-30	10		
Toronto	July 18-Aug 11	8		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926. Cases, 16. June 27-Sept. 18 Cases, 59
Regina	July 4-Sept 25	3		
Ceylon				Mar. 14-May 29, 1926. Cases, 44; deaths, 3.
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Changsha	Aug 8-14	1		
Chungking	May 2-Aug 21			Present.
Foochow	do			Do.
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations.
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-July 3	1		Do.
Dairen	Apr 26-June 20	69	16	
Do	June 28-Aug. 8	5	3	
Fushun	May 16-June 5	4		Do.
Harbin	May 14-June 30	21		Do.
Do	July 1-28	12		
Kai-yuan	May 16-June 30	10		Do.
Kungchuling	June 13-19	1		Do

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 22, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Manchuria—Continued				
Liaoyang	May 16-June 30	4		South Manchurian Railway
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do
Ssupingkai	May 16-June 30	2		Do
Teshihchiao	do	2		Do
Wa-feng tien	do	3		Do
Nanking	May 8-Aug 7			Present
Shanghai	May 2-June 26	10	25	Cases, foreign deaths, population of international concession, foreign and native
Do	June 27-July 24	3	3	
Swatow	May 9-Aug 14			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-May 31, 1926 Cases, 548, deaths, 121
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Aug 19	11	5	
Cairo	Jan 29-Apr 1	16	4	
Esthonia				May 1-June 30, 1926 Cases, 3
France				Mar 1-June 30, 1926 Cases, 141
Paris	Sept 1-20	21	5	
St Etienne	Apr 18-June 15	7	3	
French Settlements in India	Mar 7-June 26	282	282	
Gold Coast	Mar 1-May 31	662	13	
Great Britain				
England and Wales				May 23-June 26, 1926: Cases, 933 June 27-Sept 18, 1926 Cases, 1,168
Bradford	May 23-29	1		
Do	Aug 29-Sept 4	1		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-Sept 25	3		At Gateshead, several cases reported
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Sept 11	3		
Greece				
Athens	July 1-31	71	6	Including Piræus
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr 25-June 26, 1926 Cases, 54,851, deaths, 14,771 June 27-Aug 7, 1926 Cases, 16,507, deaths, 5,150
Bombay	May 2-June 26	220	134	
Do	June 27-Aug 21	93	50	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-26	24	18	
Do	June 27-Aug 28	34	29	
Karachi	May 16-June 26	44	18	
Do	June 27-Aug 21	13	7	
Madras	May 16-June 26	7	4	
Do	June 27-Sept 4	44	14	
Rangoon	May 9-June 26	10	5	
Do	July 4-24	3		
Indo-China				
Saigon	May 9-June 26	2		
Iraq				
Baghdad	do	8	3	
Do	July 4-Aug 28	2	1	
Basra	Apr 18-June 22	34	25	
Do	Aug 15-21	1		
Italy				Mar 28-June 26, 1926. Cases, 34 June 27-July 10, 1926: Cases, 3.
Catania	Aug 9-15	2		
Rome	June 14-20	4		Entire consular district, including island of Sardinia
Jamaica				Apr 25-June 26, 1926 Cases, 201 (Reported as alastrim)
Do				June 27-Sept 25, 1926: Cases, 238 (Reported as alastrim)
Japan				Apr. 11-June 10, 1926. Cases, 641.
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Do	July 4-10	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 22, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Japan—Continued				
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-June 25	2		Province
Do	July 24-Aug 20	3		Do
East Java and Madoera	Apr 11-July 3	160	6	
Do	July 4-Aug 7	43	1	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Do	July 18-Aug 14	32	1	
Latvia				Apr 1-June 30, 1926 Cases, 5.
Mexico				Feb 1-Apr 30, 1926 deaths, 982
Aguascalientes	June 13-26		5	
Guadalajara	June 13-14		2	
Do	June 29-Sept 27		8	
Mexico City	May 16-June 5	3		Including municipalities in Federal district
Do	July 25-Aug 28	4		Do
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-Oct 2		15	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Do	July 1-Sept 30		13	
Netherlands				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-Apr 30, 1926 Cases, 404; deaths, 33.
Persia				
Teheran	Apr 21-June 22		7	
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May 1, 1926. Cases, 12, deaths, 1. June 27-July 24, 1926 Cases, 2, deaths, 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Sept 11	21	6	
Oporto	May 23-June 5	4		
Do	July 11-24	2		
Russia				Jan 1-Mar 31, 1926· Cases, 2,103.
Siam				Aug 1-7, 1926· Cases, 12, deaths, 8.
Do				Aug 15-28, 1926 Cases, 25; deaths, 8
Bangkok	May 2-June 12	23	20	
Do	July 4-Aug 28	50	41	
Spain				
Valencia	Aug 22-28	1		
Straits Settlements				
Singapore	Apr 25-May 1	1		
Do	July 11-17	1		
Sumatra				
Medan	Aug 22-28			One case varioloid.
Switzerland				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tripolitania	Apr 1-30	11		
Tunisia				Apr 1-June 30, 1926 Cases, 17.
Tunis	Aug. 11-30	2		
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks
Do	Aug 15-21			Do
Idutya district	May 23-29			Do.
Natal	May 30-June 5			Do.
Orange Free State	June 20-Aug 28			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Johannesburg	May 9-June 12	5		
Do	July 11-17	1		
Yugoslavia				Apr 15-30, 1926 Cases, 2; deaths, 1
Zagreb	Aug. 9-15	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 22, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
On vessels				
S S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed At Durban, Union of South Africa, June 16, 1926 One suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Do	July 21-Aug 31	3		
Argentina				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Bulgaria				Mar 1-June 30, 1926 Cases, 87, deaths, 14
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Valparaiso	Apr 29-May 5		1	
Do	Aug 14-Sept 11	5		
China				
Antung	June 14-27	7	1	
Do	June 28-Sept 12	29	1	
Canton	May 1-31	1		
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1-May 31, 1926 Cases, 887, deaths, 91
Chemulpo	May 1-June 30	38	2	
Do	July 1-31	7	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Do	July 1-Aug 31	8		
Czechoslovakia				Jan 1-June 30, 1926 Cases, 150, deaths, 6
Egypt				
Alexandria	July 16-Aug 19	3		
Cairo	Jan. 29-Mar 4	74	17	
Do	July 23-Aug 5	1		
Port Said	June 4-24	4	1	
Do	July 9-Aug 19	4	1	
Great Britain:				
Scotland—				
Glasgow	July 30-Aug 21	9	1	
Ireland (Irish Free State).				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerr County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-May 8, 1926. Cases, 3.
Palermo	Sept 12-18	1		
Japan				Mar 28-May 29, 1926. Cases, 37
Latvia				May 1-June 30, 1926 Cases, 19
Lithuania				Mar 1-June 30, 1926 Cases, 199, deaths, 22
Mexico				Feb 1-Apr 30, 1926 Deaths, 110.
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal district.
Do	June 13-19	9		Do
Do	July 25-31	3		Do
Do	Aug 15-Sept 18	31		Do
San Luis Potosi	June 13-26			Present city and country.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 22, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Morocco				Mar 1–June 30, 1926: Cases, 126
Norway				
Stavanger	Sept 6–12	1		
Palestine				Mar 1–June 30, 1926: Cases, 14, deaths, 1. Aug 10–Sept 6, 1926: Cases, 3
Gaza	July 6–12	1		
Haifa	July 13–Aug 30	5		
Halahal	Aug 17–23	1		
Jaffa district	June 15–28	5		
Majdal district	July 13–Aug 2	2		
Nazareth district	do	3		
Tiberias	Aug 3–9	1		
Yavniel	Aug 17–23	1		
Persia				
Teheran	May 23–June 22		1	
Peru				
Arequipa	Jan 1–31		2	
Poland				Mar 28–June 26, 1926: Cases, 1,272, deaths, 85. June 27–July 24, 1926: Cases, 147, deaths, 11.
Rumania				Mar 1–May 31, 1926: Cases, 711, deaths, 69
Russia				Jan 1–Mar 31, 1926: Cases, 14,814
Tunisia				Apr 1–June 30, 1926: Cases, 110
Tunis	June 11–30	3		
Turkey				
Constantinople	June 16–22	1		
Union of South Africa				Apr 1–May 31, 1926: Cases, 183, deaths, 49
Do				July 1–31, 1926: Cases, 90, deaths, 17
Cape Province				Apr 1–June 30, 1926: Cases, 202, deaths, 24, native. July 1–31, 1926: Cases, 58, deaths, 15
Glengray district	June 27–July 3			Outbreaks
Grahamstown	do	1		
Natal				Apr 1–June 30, 1926: Cases, 28. July 1–31, 1926: Cases, 23, deaths, 2
Durban	July 25–Aug 7	9	1	
Orange Free State				Apr 1–June 30, 1926: Cases, 24, deaths, 4. July 1–31, 1926: Cases, 7
Transvaal				Apr 1–June 30, 1926: Cases, 16; deaths, 5. July 1–31, 1926: Cases, 2. Aug 15–21, 1926: outbreaks
Walkkerstroom district	June 20–26			Outbreaks
Wolmaransstad district	do			Do
Yugoslavia				Apr 15–June 30, 1926: Cases, 48, deaths, 7. July 1–Aug 31, 1926: Cases, 3, deaths, 1
Zagreb	May 15–21	1		

YELLOW FEVER

Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9–June 26	10	7	
Do	July 1–10	1		
Gold Coast	Apr 1–May 31	6	3	

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1926

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1926

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C C PIERCE, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912

They contain (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world (2) Articles relating to the cause, prevention, or control of diesase (3) Other pertinent information regarding sanitation and the conservation of the public health.

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CONTENTS

PUBLIC HEALTH REPORTS

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A CASE OF TYPHUS-LIKE FEVER FOLLOWING TICK BITE

By R R Spencer, Surgeon, United States Public Health Service

Following is the report of a case of typhus-like fever following a tick bite, investigated by the writer, who was detailed for the purpose by the United States Public Health Service on August 16, 1926:

S P, age 35, wife of a butcher in Norfolk, Va, was bitten on the inner left thigh, the left buttock, and the lower right abdomen by a tick which came from a calf hide shipped from North Carolina or Virginia

At each point of the tick bite, swelling, redness, and a small ulcer developed The tick was destroyed Similar ticks had often been noticed by the butcher and his family; and occasionally a tick had bitten one of them, but never before had any illness followed

On July 15, 10 days after the tick bite, the patient had a chill, fever, severe headache, and muscular and joint pains all over the body. Two days later, fever and prostration being marked, she called her physician, and on the 20th was removed to a hospital On the same day, the attending physician noted a faint, pinkish rash over the chest and abdomen The rash faded and reappeared on Sunday, July 25, becoming more definite and purplish and at that time covering all parts of the body except the face. Upon admission the patient showed extreme prostration and registered a temperature of 105° F.

Physical examination.—(July 28) the patient was a stout woman. The face was flushed, the conjunctivae were congested and watery, the expression was anxious, and the mental condition dull. Questions were answered slowly; mental concentration was obviously difficult The tongue was very dry and coated. There were no nits or evidence of lice in the head or clothing Lice had been carefully looked for upon admission

Over the chest, back, and extremities, including palms and soles, there was a fine petechial rash appearing in discrete, irregular macules, some of which would disappear upon pressure The majority were distinctly hemorrhagic in type and did not disappear upon pressure.

The heart and lungs were apparently normal

The abdomen was large and flabby and a distinct movable mass could be felt in the lower right quadrant There was no indication that this mass was in any way connected with the present illness.

The spleen was not readily palpable because of the excessive abdominal fat.

The inguinal glands on both sides were palpable and slightly tender Small healing ulcers were still present on the lower right abdomen, left inner thigh, and left buttock, at the points of the tick bite

Laboratory findings—Urine examinations of catherized specimens, made on July 21, 24, and 26, showed some albumin, fine granular casts, and a few pus cells.

The blood picture on July 20 showed white blood cells 5,600; a normal differential count, and smears were negative for blood parasites

On July 21, the Widal was negative and a blood culture was negative

On July 22, stool was negative for parasites

On July 24, white blood cells, 8,800; small mononuclears 10 per cent; large mononuclears 10 per cent, polymorphonuclears 89 per cent Blood serum taken from the patient on July 25 and 28 and August 6 did not agglutinate *B. proteus* X_{19} or *B. tularense* The sample taken on July 28 also gave negative agglutination for *B. eberthi* and *B. abortus*

On July 28, the 13th day of fever, six guinea pigs were injected intraperitoneally with whole citrated blood of the patient, each animal receiving 2 c. c. Only one of these guinea pigs developed fever, which began on the 13th day after injection. Transfer of blood from this pig to other guinea pigs and to a monkey were made with entirely negative results.

The patient's fever continued for three weeks There was no definite crisis; convalescence was slow and there were no sequelae.

Discussion—The clinical aspects of this case, in nearly every detail, suggested typhus fever, although it was not supported by the laboratory findings. Failure of the serum to agglutinate *B. proteus* X_{19} and the negative results of animal inoculation do not, however, exclude typhus fever.

Rocky Mountain spotted fever was considered, but the negative animal inoculations and the locality make such a diagnosis very doubtful.

Other ticks similar to the one that had bitten the patient were secured and proved to be *Amblyomma americanum*. This tick is an occasional parasite of man, but has never been implicated in the transmission of disease. The tick bites may have been coincidental; but because the bites caused local sores and glandular enlargement preceding the onset of fever, one can not ignore their possible significance.

The case is reported because of the association of the illness with tick bites, the consistently negative agglutination of *B proteus* X_{19}, and the failure to reproduce the disease in laboratory animals.

SYMPOSIUM ON THE PREVENTION AND CURE OF CANCER

A symposium on cancer control was held at Lake Mohonk, N Y., September 20–24, 1926, under the auspices of the American Society for the Control of Cancer The purpose of the meeting was to consider the prevention and cure of cancer from a practical standpoint, to crystalize existing knowledge, and to express in concise language the fundamental ground-work in fact and opinion upon which the collective effort now being made in the United States and other countries for the control of cancer should be continued and extended

The symposium was attended by distinguished workers in the field of cancer control from both this country and Europe, and a fund of information and opinion was presented upon which the society will base its plans for the conduct of its work for many years to come

Two resolutions were passed by the delegates The first resolution pertained to the development of measures for continuation of the international effort to unify and disseminate knowledge regarding the control of cancer. The second was the adoption of statements of facts and opinions which should form the basis for campaigns against the disease The text of this statement given below is taken from the Health News for October 18, 1926, published by the New York State Department of Health

Although the present state of knowledge of cancer is not sufficient to permit of the formulation of such procedures for the suppression of this malady as have been successfully employed for the control of infectious diseases, there is enough well-established fact and sound working opinion concerning the prevention, diagnosis, and treatment of cancer to save many lives, if this information is carried properly into effect

1 The causation of cancer is not completely understood, but it may be accepted that, for all practical purposes, cancer is not to be looked upon as contagious or infectious.

2. Cancer itself is not hereditary, although a certain predisposition or susceptibility to cancer is apparently transmissible through inheritance This does not signify that, because one's parent or parents or other members of the family have suffered from cancer, cancer will necessarily appear in other persons of the same or succeeding generation

3 The control of cancer, so far as this subject can be understood at the present time, depends upon the employment of measures of personal hygiene and certain preventive and curative measures, the success of which depends upon the intelligent cooperation of the patient and physician.

4. Persons who have cancer must apply to competent physicians at a sufficiently early stage in the disease, in order to have a fair chance of cure This applies to all forms of cancer. In some forms early treatment affords the only possibility of cure.

5. Cancer in some parts of the body can be discovered in a very early stage, and if these cases are treated properly the prospect for a permanent cure is good.

6 The cure of cancer depends upon discovering the growth before it has done irreparable injury to a vital part of the body and before it has spread to other parts. Therefore, efforts should be made to improve the methods of diagnosis in these various locations and the treatment of the cancers so discovered.

7 The public must be taught the earliest danger signals of cancer which can be recognized by persons without a special knowledge of the subject, and induced to seek competent medical attention when any of these indications are believed to be present.

8. Practitioners of medicine must keep abreast of the latest advances in the knowledge of cancer in order to diagnose as many as possible of the cases of cancer which come to them

9 Surgeons and radiologists must make constant progress in the refined methods of technic which are necessary for the diagnosis and proper treatment not only of ordinary cases but of the more obscure and difficult ones.

10 There is much that medical men can do in the prevention of cancer, in the detection of early cases, in the referring of patients to institutions and physicians who can make the proper diagnosis and apply proper treatment, when the physicians themselves are unable to accomplish these results. The more efficient the family doctor is, the more ready he is to share responsibility with a specialist

11. Dentists can help in the control of cancer by informing themselves about the advances in the knowledge of the causes of cancer, especially with relation to the irritations produced by imperfect teeth and improperly fitting dental plates. They can also help by referring cases of cancer which they discover to physicians skilled in the treatment of cancer in this location. It may be doubted whether all dentists fully realize the help which can be obtained from X-ray photographs in revealing not only the state of the teeth but the condition of the bone surrounding them.

12 Medical students should be instructed in cancer by the aid of actual demonstrations of cancer patients, and this to a sufficient extent to give them a good working knowledge of the subject.

13 The most reliable forms of treatment, and, in fact, the only ones thus far justified by experience and observation, depend upon surgery, radium, and X rays.

14. Emphasis should be placed upon the value of the dissemination of the definite, useful, and practical knowledge about cancer, and this knowledge should not be confused nor hidden by what is merely theoretical and experimental.

15 Efforts toward the control of cancer should be made in two principal directions: (1) The promotion of research in order to increase the existing knowledge of the subject, and (2) the practical employment of the information which is at hand Even with our present knowledge many lives could be saved which are sacrificed by unnecessary delay.

At a dinner to the foreign guests held in New York City at the end of the symposium, Dr. William H. Welch, director of the Institute of Hygiene and Public Health, Johns Hopkins University, said:

"The great note struck at the Mohonk symposium was the tremendous importance of the cancer question and the appalling problems which it presents. There was never a time when tuberculosis

presented problems of such magnitude * * * There is no disease to which larger additions to our knowledge have been made than cancer, but because this knowledge does not reach the public which we are most anxious to reach, this seems trivial "

In a recent issue of Campaign Notes of the American Society for the Control of Cancer, the following statements appeared:

Few people realize the seriousness of the cancer problem According to recent statistics issued by the United States Census Bureau, 1 in every 10 adults now living in the United States is destined to die of cancer. Between the ages of 45 and 65 one in every five deaths among women is due to this disease Cancer is now a greater menace to adult life than tuberculosis, and its death rate is rapidly increasing.

Cancer is in many respects a unique disease Against it no sanitary or public health measures have any effect It is not affected by preventive measures such as are employed against infectious diseases. The upbuilding of the general bodily health and economic conditions are incapable of reducing its prevalence.

The only effective measures which now offer any promise are personal ones. People must learn the symptoms and apply to a competent physician upon the first suspicion of the presence of cancer. On their part physicians must give prompt and skillful attention to the patients who come to them There must be a widespread campaign to teach the public what everyone should know about cancer, and a dissemination among medical practitioners of information that will help them in diagnosing and treating their cases

Nothing less than the utmost authority and the most reliable opinion will suffice to meet the pessimistic attitude of many people who think that cancer is incurable, hereditary, and infectious. The strongest argument possible must be presented to convince the man in the street who is inclined to listen to the claims of quacks who hold out a prospect of cure, until the disease is too far advanced to make skillful help of any use

MALARIA IN THE PRAIRIE RICE REGIONS OF LOUISIANA AND ARKANSAS

By M. A Barber, Special Expert, W H W Komp, Associate Sanitary Engineer, and T B Hayne, Technical Assistant, United States Public Health Service

EXTENT AND METHOD OF CULTIVATION OF PRAIRIE RICE

The largest area devoted to the cultivation of prairie rice in the United States is found on that portion of the coastal plain extending approximately from Rayne, La., to Crosby, Tex This area, a large part of which was originally prairie, offers the climate, level ground, relatively impermeable subsoil, and the supply of irrigation water necessary for rice growing. A similar area is found in eastern Arkansas. Of the 904,000 acres of rice grown in the United States in 1925, 450,000 were found in Louisiana and 174,000 in Arkansas.

The cultivation of prairie rice is a comparatively new industry in the United States. Louisiana had about 42,000 acres under cultiva-

tion in 1879, but the greater part of the development in rice culture has occurred since 1889. In Texas practically all of the industry has developed since 1889, and in Arkansas since 1905 With the growth of rice culture, much land formerly considered of little value except for grazing has been brought under cultivation; and this industry has greatly increased the population and wealth of certain parts of the prairie country of the southern United States.

Irrigation is almost universally employed in the cultivation of prairie rice. Water for irrigation is pumped from streams or from deep wells In the Louisiana-Texas area nearly four-fifths of the irrigation water is taken from streams, while in Arkansas practically all of it comes from wells.

During a large part of the growing season the plants stand in shallow water Levees prevent the water from running off and the impermeable subsoil keeps it from seeping away The seed is sown in early May, and the water is usually turned into the fields during that month Drainage for harvest is commonly done in September The majority of the fields are thus kept under water during a period of three or four months in the year Only one crop a year is harvested As a rule the land is used for rice one year and lies fallow or is devoted to other crops during the following year.

The method of cultivation of prairie rice in Arkansas and Louisiana is, then, such as to greatly favor the production of *Anopheles* Large areas are converted into shallow ponds and remain under water during the greater part of the warmer season of the year The water is, for the most part, bright and clear, and is replenished continually with fresh supplies, so that there is no accumulation of products of decay which might pollute the water and render it unfit for anopheline larvæ The fields are exposed to the sun except where the growing rice affords a partial shade, and algæ grow in abundance all over the fields Food and aeration are thus abundantly provided. Grassi has well called rice fields the "Paradise of *Anopheles*." [1]

INCIDENCE OF ANOPHELES IN THE PRAIRIE RICE DISTRICT

The number of larvæ per dip taken up by a dipping pan of standard size gives a rough but useful approximation of the incidence of anopheline larvæ in a breeding place. Two thousand seven hundred and eighty-five dips made by us in the rice fields during the years 1923, 1924, and 1925 gave a total of 2,985 anopheline larvæ, an average of 1.1 per dip. The dips were made with a pan measuring 5 by 9 inches at the top and 3¾ inches in depth We estimated that each dip swept larvæ from an area averaging approximately 50

[1] For many of the statistical facts in relation to rice growing we are indebted to Mr Charles E Chambliss, Associate Agronomist in Charge, Rice Investigations, U S. Department of Agriculture See Farmers' Bulletins No. 1092, February 1920, and No 1356, October, 1925, U S. Department of Agriculture.

square inches Many of the dips were made in more or less selected places, and the average incidence of larvæ was less than 1 1 per 50 square inch; our figures, however, indicate a large production since the breeding area is very great

Larvæ are abundant in the midst of the fields as well as in the ditches inside and outside the dikes More were found in partially open places than where the rice was thick and high They appear early in the season, large collections were made in May. Sometimes good breeding was found in grassy, fallow fields partially flooded through some defect in the dikes

Very large numbers of adult *Anopheles* are found in various resting places throughout the rice district Stables, outhouses, schoolhouses, unscreened dwellings, hollow trees, and similar shelters often swarm with them A single building may contain thousands of them, and surfaces are sometimes blackened by the large numbers of *Anopheles* roosting on them We counted 304 *A quadrimaculatus* resting on a board 12 by 13 inches Le Prince (1) counted in one barrel at Stuttgart, Ark, 2,768 *A quadrimaculatus* The number of imagoes in the Arkansas fields was somewhat greater than in the fields of Louisiana

SPECIES OF ANOPHELES FOUND IN THE RICE REGION

Table 1 shows that *A quadrimaculatus* is the prevailing species found in the imago stage, nearly 97 5 per cent of the imagoes caught in the rice region of Arkansas belonged to that species During the summer of 1920, in Arkansas, the proportion of *A. crucians* tended to increase as the season advanced In June and September, 1925, we made collections in the same region, and, in addition, we surveyed many thousands of *Anopheles* in their resting places; not one *A. crucians* was seen. Geiger, Purdy, and Tarbett (2) caught 19,238 *Anopheles* near Lonoke, Ark., all of which proved to be *A. quadrimaculatus*. Comparing our findings in 1920, in which over 800 *A. crucians* were caught, with our findings of 1925 and with those of Geiger, Purdy, and Tarbett, it would appear that in the same general area considerable variation in the proportion of *A crucians* may occur in different years

In the Louisiana rice fields the proportion of *A. crucians* is high; nearly half of the imagoes we took in the adult stage were of that species. In June, 1917, Geiger, Purdy, and Bates (3) found in the Gueydan district of Louisiana imagoes of only *A. crucians* and *A. punctipennis*, the *A crucians* being about twice as abundant as the *A.*, *punctipennis*. *A. quadrimaculatus* was first found by them in the latter part of June, and by July 10 this species superseded all others.

TABLE 1 —*Anopheles caught in imago stage in rice fields*

Locality and year	May		June		July		August		September		October		All months			
													Numbers		Percentage incidences	
	A quad	A cruc	A quad	A cruc	A quad	A cruc	A quad	A cruc	A quad	A cruc	A quad	A cruc	A quad	A cruc	A quad	A cruc
Arkansas, 1920	----	----	----	----	----	----	15, 815	152	15, 695	401	407	257	31, 917	810	97 5	2 5
Arkansas, 1925	----	----	458	0	----	----	----	----	799	0	----	----	1, 257	0	100 0	0 0
Total Arkansas	----	----	458	0	----	----	15, 815	152	16, 494	401	407	257	33 174	810	97 6	2 4
Louisiana, 1923	----	----	426	187	1, 826	545	852	504	191	56	1	0	2, 796	1, 292	68 4	31 6
Louisiana, 1924	545	541	1, 796	2, 715	1, 338	1, 397	1, 517	1, 973	2, 811	533	----	----	8, 507	7, 159	54 3	45 7
Total Louisiana	545	541	2, 222	2 902	3, 164	1, 942	2, 369	2, 477	3, 002	589	1	0	11, 303	8, 451	57 2	42 8
Grand total	545	541	2, 680	2, 902	3, 164	1, 942	18 184	2, 629	19, 496	990	408	257	45, 477	9, 361	82 9	17 1

The high proportion of *A. crucians* in the Louisiana rice fields as compared with the Arkansas fields is striking. Breeding conditions in the rice fields of both regions are similar, except that a larger proportion of the Arkansas fields are irrigated by water from wells. The times of seeding and harvesting rice are nearly synchronous in the two States, and both States have an even, high summer temperature. In the Louisiana rice country the monthly mean temperatures for June, July, and August range from 79.9° to 82 8° F., and the annual mean temperature ranges from 67.4° to 69 1° In Arkansas the rice region has an annual mean temperature of 61 5° (Chambliss)

It has been alleged that the hydrogen-ion concentration of *Anopheles*-breeding waters may be a factor in determining the prevalence of certain species In the Louisiana rice fields we made 35 tests of the hydrogen-ion concentration in different years and at different seasons, and obtained a range of pH 6.0 to pH 8.6. Twenty-six of the 35 tests fell within the range of pH 7.8 to pH 8.2 A well supplying water for irrigation varied from pH 7.2 to pH 8.4, and water from an irrigation canal had a pH of 6.8

In the Arkansas rice fields we found a range of pH 6 8 to pH 9.2 Of a total of 15 tests (all made in June and September, 1925), we found 12 within the range of pH 7.2 to pH 8.4. Eight tests of wells supplying water for irrigation gave the narrow range of pH 7.2 to pH 7.4.

The hydrogen-ion concentration in the rice fields shows, then, a considerable range, depending in part on the distribution of masses of algæ, which tend to increase the alkalinity of the water; but the range is so similar in the rice fields of the two States as to make it unlikely that the greater prevalence of *A. crucians* in Louisiana is

due to any quality of the hydrogen-ion concentration of the water in which the *Anopheles* breed.

In Table 2 is shown the number of *Anopheles* bred out from larvæ or pupæ collected during 1923 and 1924 in the rice fields of Louisiana. It is seen that more than twice as many *A crucians* as *A quadrimaculatus* were bred out. It is interesting to compare this proportion with that of the percentage of *A crucians* caught in the imago stage, where this species comprised only 43 per cent of the adult *Anopheles* collected in the same region.

The discrepancy between these two percentages is not easy to explain. It is possible that the two species, *A. quadrimaculatus* and *A crucians*, prefer different daytime resting places, and that in our collections of imagoes, made for the most part in barns housing animals at night, we did not always include the preferred resting places of *A crucians* *A quadrimaculatus* often predominated in resting places immediately adjacent to rice fields where the larvæ and pupæ of *A crucians* were by far the more common of the two species

In addition to *A crucians* and *A quadrimaculatus*, a few *A. walkeri* were found Two *A walkeri* were bred out in the rice fields of Louisiana, and their imagoes were occasionally found in resting places near the rice fields We found but few *A punctipennis* as adults or larvæ During the summer of 1920 we collected many thousands of *A quadrimaculatus* in the rice region of Arkansas, but found only 10 *A. punctipennis*.

TABLE 2 —*Anopheles bred out from larvæ or pupæ taken in rice fields of Louisiana in 1923 and 1924*

May		June		July		August		September		October		All months			
												A cruc.		A quad	
A cruc	A quad	A cruc	A quad	A cruc	A quad	A cruc	A quad	A cruc	A quad	A cruc	A quad	No	Per cent	No	Per cent
81	50	578	303	293	194	196	32	407	129	9	1	1,560	68 8	709	31 1

Culicine larvæ were plentiful in the rice fields and their imagoes often constituted a pest, especially in the Arkansas region. In the Louisiana and Arkansas regions, while the rice is being flooded, common species are *Psorophora columbiae* Dyar and Knab, and *Psorophora discolor* Coq., together with *Psorophora ciliata* Fab. Later, as grass and algæ increase in the rice fields, *Culex* (*Neoculex*) *testaceus* (=*territans*) Van der Wulp and *Culex* (*Choeroporpa*) *leprincei* Dyar and Knab are also found commonly with the larvæ of *Anopheles*.

THE MALARIA PARASITE AND SPLEEN INDEX IN THE PRAIRIE RICE REGIONS

Geiger, Purdy, and Bates (3) surveyed a population at Lonoke, Ark., during the month of January and found only 0.5 per cent infected with malaria parasites among 1,965 persons examined. In May they found in the same district 1.6 per cent infected among 2,162 examined. Children 1–10 years of age gave zero per cent in January and 1.9 in May. In the Gueydan district of Louisiana they made a survey in April and found but 1.1 per cent infected among 417 persons examined. Children 1–10 years old gave an index of 1.8 per cent. They found a malaria history rate of 29 per cent in the Lonoke population and exactly the same rate in the Gueydan group.

In our survey of the Louisiana rice region made some six years later than that of Geiger, Purdy, and Bates, we also found very low parasite rates. Our results for school children are shown in Table 3, which compares malaria indices of the rice country with those in surrounding regions not near rice fields.

TABLE 3.—*Parasite indices in Louisiana, 1923–1924 (school children)*

	Number of schools	Number of school examinations	Number children examined	Per cent positives
Group I. Schools in the immediate vicinity of rice fields.				
White	10	11	399	1.8
Colored	6	14	364	3.8
Total	16	25	763	2.8
Group II. Schools not in the vicinity of rice fields.				
White	11	16	499	2.8
Colored	14	20	568	5.1
Total	25	36	1,067	4.0
Grand total, groups I and II	41	61	1,830	3.5

Schools and school "examinations" are distinguished in Table 3, because in some cases a school was examined more than once, either in different years or in the spring and autumn of the same year. There are fewer repetitions of the examination of the same child than would be indicated by the ratio of schools to school examinations because there were frequent changes in the personnel of the schools. Practically all schools were rural, or situated in small towns. So far as we made any selection of schools for examination it was in the direction of those in the more malarious districts.

Table 3 shows clearly that the malaria parasite rate among school children of the Louisiana rice district is low, and somewhat lower than in schools in the surrounding country, where cane and cotton are the principal crops. Of the 61 school examinations made, about

one-half gave no positives at all—the proportion of negative school examinations being about the same in and out of the rice region.

Colored children gave higher indices than the white, and the autumn index was higher than that of the spring. Of 1,113 children of both races examined during the spring term, from January to May, inclusive, 3.0 per cent were found positive. Of 717 examined during the autumn term, all during September, October, and November, 4.1 per cent were found positive.

In addition to the school work, we determined the malaria parasite index of certain Louisiana plantations, lumber camps, and neighborhoods. Within the rice region, 4 of such surveys gave 3.2 per cent positive among 123 persons examined. Outside of the rice region, 15 surveys gave 6.8 per cent positive among 577 persons examined.

We also examined many blood specimens for the physicians of Crowley, La. During 1923 we obtained 88 positive specimens through this source, and in 1924 only 22. The percentage of positives among such examinations is of little significance because we dealt with a highly selected group; the fact that we found so few positives is noteworthy, however, since several physicians cooperated with us during the entire malaria season of two years.

In April, 1923, 190 spleen examinations were made of school children in Louisiana by Kenneth F. Maxcy, Passed Assistant Surgeon, United States Public Health Service. Only 3.6 per cent showed enlarged spleens. Examinations were made of the child in the standing position. Forty-two of the children examined were found in a school (Gueydan) located in the immediate vicinity of rice fields; all were negative. The remainder came from localities more or less remote from rice fields.

TABLE 4.—*Malaria parasite rate in certain rural schools in Arkansas*

GROUP I. SCHOOLS IN THE MIDST OF RICE FIELDS

Check No.	School	Color	1922		1923		1924		1925		Total, all years	
			No. examined	Per cent positive	No. examined	Per cent positive	No. examined	Per cent positive	No. examined	Per cent positive	No. examined	Per cent positive
1	Gellman	White	30	6.7	27	3.7	18	0.0	17	5.9	92	4.4
2	St. Foy	do	29	0.0	29	0.0	27	3.7	30	0.0	115	0.9
3	Shannon	do	25	4.0	25	4.0	25	0.0	24	0.0	99	2.0
	Total, Nos. 1, 2, and 3		84	3.6	81	2.5	70	1.4	71	1.4	30[illegible]	2.3
4	Stanley	White			18	5.6			4	0.0	22	4.5
5	Sunshine	do			20	0.0	25	16.0	21	9.5	66	9.1
	Total group I		84	3.6	119	2.5	95	5.3	9[illegible]	3.1	334	3.6

GROUP II. SCHOOLS NOT IN RICE FIELDS

Check No.	School	Color	1922 No. examined	1922 Per cent positive	1923 No. examined	1923 Per cent positive	1924 No. examined	1924 Per cent positive	1925 No. examined	1925 Per cent positive	Total No. examined	Total Per cent positive
6	Casco	Colored	22	22.7	48	31.3	48	2.1			118	17.8
7	Gill	White			36	16.6	21	4.8	19	0.0	76	9.2
8	Alcorn	do			12	9.5	42	2.4			84	6.0
	Total group II		22	22.7	123	19.8	111	2.7	19	0.0	278	11.9

With but few exceptions, our surveys of the Arkansas schools were made in September, October and November, months in which the malaria parasite rate is highest Table 4 shows definitely that the parasite rate of certain rural schools in the rice fields is low, and generally lower than that outside the rice region or at its borders. Especially remarkable is the low rate for schools Nos. 1, 2, and 3, surveyed during four successive years, in every case in September, October, or November The year rate of each of these three schools, as well as the aggregate for the four-year period, is low. Stukey school showed but one positive during the whole period. Spleen examinations were made of the boys of these three schools during the autumn of 1923 and 1924 by C P Coogle, Acting Assistant Surgeon, United States Public Health Service In the aggregate only 5 3 per cent of a total of 76 examined showed enlarged spleens

Schools Nos 1, 2, and 3 are situated in the very midst of the rice fields The children, all of the white race, live in houses for the most part good and situated in prosperous neighborhoods The population of the neighborhoods in which these schools are situated is relatively constant, showing less of the shifting so common among farmers of the renter class.

A group of town schools gave the following malaria parasite indices: 4.7 per cent positive among 86 colored children in two schools in the rice country; 11 6 per cent positive among 86 colored children in two schools at the edge of the rice country; 8.3 per cent postive among 169 white children in two schools also at the edge of the rice country; 0 per cent positive among 27 white children of a school not in the rice region

Certain house to house neighborhood surveys made in the Arkansas region may be compared with those of the schools We made these also in the summer and autumn, and in some of them we selected persons more likely to be infected The results are given in Table 5.

TABLE 5.—*Neighborhood surveys, Arkansas—Malaria parasite rate*

Locality	Color	Number examined	Per cent positive	Locality	Color	Number examined	Per cent positive
In rice region	White	54	1 8	Not in rice region	White	34	8 8
Do	Colored	112	8.0	Do	Colored	100	11 0
Total, white and colored		166	6 0	Total, white and colored		134	10 4

During portions of the summers of 1920 and 1922 we examined blood specimens for the physicians of Stuttgart, Ark. Most of the patients came from the rice region or the country immediately adjoining it. One hundred and one examinations gave 18 positives. This group, of course, was a highly selected one.

In sum, it is evident that malaria is present in the rice regions of both Louisiana and Arkansas, but that the rate is low, rather lower than in certain regions situated outside of the rice regions but in the same general neighborhood. Very low rates persist from year to year in certain neighborhoods situated in the midst of the rice fields where *Anopheles* swarm. The amount of malaria within the rice regions is doubtless increased by the presence of more highly infected communities at their borders.

In all blood examinations the slides were examined by one of us (Barber) personally, with the exception of the 1923 examination of the Arkansas schools, which was done by the United States Public Health Service laboratory at Memphis, under the direction of Dr. William Krauss. Thick films were employed in all specimens examined by ourselves.

THE TYPE OF MALARIA PARASITE FOUND IN THE RICE REGION OF LOUISIANA

The type of parasite found in the rice region of Louisiana is shown in Table 6, where data are arranged by months. We made but few examinations in the months of December and January, and obtained no positives during these months. One mixed case was found, but is not included in the table.

TABLE 6.—*Positive cases of malaria found in Louisiana, arranged by months and type of parasite*

Month	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	All months
Number of positives	6	4	4	16	10	10	23	27	22	11	133
Per cent of E-A	83.3	100.0	25.0	12.5	10.0	0	21.7	25.9	54.5	63.6	38.1

The number of cases shown in Table 6 is small, but sufficiently large to indicate clearly that the percentage of estivo-autumnal malaria falls to a minimum in June and July; then it rises rapidly, reaching its maximum in the late autumn and winter and in the early spring months. Barber and Mayne (4) have shown that a very similar curve of yearly incidence of the types of malaria parasite occurs generally in the Southern States, except that in the general series the minimum of the estivo-autumnal type occurs earlier in the season—April or May.

In the Arkansas rice region our surveys were made in late summer or in the autumn, when a high estivo-autumnal proportion would be expected. Of 46 positives obtained in the midst of the rice region, 50 per cent proved to be estivo-autumnal, of 76 obtained outside or at the borders of the rice country, 52.6 per cent were estivo-autumnal. In both groups positives obtained from negro cases showed a higher

percentage of estivo-autumnal than those from white. Of the total number of estivo-autumnal cases, about 39 per cent had crescents

It is stated that, with the decrease of malaria in the rice region of northern Italy, the estivo-autumnal type of parasite has become relatively rare (5) In our rice districts any amelioration in the number or severity of cases seems to have come about independently of any change in the type of parasite.

The effect on the malaria rate of the introduction of rice cultivation is hard to estimate since we lack trustworthy malaria surveys of the prairie regions prior to the beginning of rice culture The evidence of physicians in both regions is almost unanimous to the effect that there has been a decided reduction within the last 15 or 20 years in both the amount and the severity of the disease Blackwater fever and the more severe types of "swamp fever" have become almost extinct. Dr H. L Gardiner, health officer of Acadia Parish, a county situated in the midst of the Louisiana rice district, informed us that, during a tenure of office of six years, 1919 to 1924, inclusive, he had not signed a single death certificate for malaria A comparison of the parasite rates obtained by Geiger, Purdy, and Bates in 1917–18 with the rates obtained by us six years later indicate little more than the absence of a striking change in malaria during that period In schools Nos 1, 2, and 3, Table 4, one might deduce evidence of decrease in malaria, but the numbers are too small to show any significant change

THE RELATION OF RICE CULTIVATION AND MALARIA IN OTHER LOCALITIES

A relative immunity from malaria in the presence of numerous *Anopheles* bred in rice fields is not without parallel in this and other countries.

Herms (6) states that rice culture as practiced in California is responsible for vast hordes of *Anopheles*, but thus far there has been little or no increase in malaria as a consequence. Lenert (7) states that the more malarious portions of California are not found near the rice fields, but that there are few dwellings in their immediate vicinity.

Certain portions of northern Italy possibly furnish conditions more nearly parallel with those of our prairie rice fields—a temperate climate, intensive rice culture with irrigation, and the presence, within flight distance of dwellings, of abundant *Anopheles* known to be vectors of malaria The present condition of malaria in that region is described by Giardina, Novelli, Alessandrini, and Sampietro (5), and may be summed up as follows: Malaria in the valley of the Po, formerly severe and widely diffused, has decreased with the improvement in agriculture and with bettered social and sanitary conditions

of living. The reduction has been most marked within the last 30 years and is most pronounced where the cultivation of rice is most intense Benign tertian is the prevailing type of parasite found, and severe cases of malaria are rare. Estivo-autumnal, when it occurs, tends to run a mild course. Together with a reduction in the malaria rate, there has been a decrease in the death rate from all causes. In some localities of the rice regions the introduction of numerous cases infected during the World War caused an increase in the malaria rate But the rise was transient and the rate soon returned to normal. Apparently the "soil" had become unfavorable to the spread of the disease. *Anopheles* are present in enormous numbers. The anopheline species represented are *A maculipennis*, one of the chief malaria vectors of Europe, about 88–90 per cent; *A. superpictus*, about 7–10 per cent, *A pseudopictus*, 2–3 per cent; *A. bifurcatus*, rare.

Eugling (8) compares three villages in Macedonia, one in the swamps, one in a rice region, and one 1½ kilometers from rice fields The village in the swamp region shows the highest children's death rate, the other two showing a rate hardly one-half as great as that of the swamp dwellers. Spleen, parasite, and anemia rates were high in all three. The rice region was more favorable to the production of *Anopheles* than the swamps The author is of the opinion that the cultivation of rice has diminished malaria. With better economic conditions the people have better houses, better food, and better medical treatment, and are able to buy more quinine.

Nocht (9), in describing observations made in southern Europe during a recent journey, states that in Bulgaria malaria is no worse in rice-growing districts than in the truck-growing regions. In certain regions of Spain where rice cultivation is of ancient date and the inhabitants have become prosperous, malaria is insignificant in spite of abundant *Anopheles*; while in newly opened rice regions, where the people still have to contend with economic hardships, malaria is far more troublesome.

Certain rice-growing districts in the Orient also enjoy a relative freedom from malaria, but the species of *Anopheles* bred in them may not always be the most efficient vectors of malaria. Watson (10) states that on the coastal plains of Assam, where the *Anopheles* are *A. rossi*, *A. sinensis*, *A. kochi*, and *A. barbirostris*, the rice regions are generally healthful, whereas in the valleys where *A. minimus* and *A. maculatus* are also produced, they are generally unhealthful In certain regions of the Philippines, where the anopheline species are chiefly *A. rossi*, *A sinensis*, and *A. barbirostris*, Barber, Raquel, Guzman, and Rosa (11) found both spleen and parasite rates almost nil. Some rice regions of the Malay States also show a relatively low parasite rate. Walch (12), however, has described an epidemic of malaria in the rice fields of Java caused by *A. sinensis*. The *A.*

sinensis concerned in this epidemic was of the variety *vanus*, which may be a better vector than the type form

In Bengal, Bentley (14) describes an instance in which the decline in the irrigated culture of rice and jute has brought about a decrease in population and an increase in the malaria rate The building of embankments has prevented the annual inundations and the deposition of soil-enriching silt and has increased the swamp area The formation of swamps and of other waters lacking silt has increased the production of *Anopheles* also, so that conditions here are not exactly parallel with those of most rice regions, where mosquito production is usually augmented by irrigation But the impoverishment of the people through the decline in agriculture has doubtless been one factor in the increase in malaria

Kendrick (15) made a survey of 30,000 children in the rice-producing area of the Central Provinces of India In the open plains country he found an average spleen rate of only 4 3 per cent among 12,384 children. Areas with jungle and hill in excess and close to villages gave an average spleen rate of 70 5 per cent among 8,971 children An intermediate area comprising the edges of open plains near forest, jungle, or hill gave an average rate of 24 1 among 9,075 children Malaria, then, was not associated with the intensive cultivation of rice, but with certain topographical features The commonest *Anopheles* is *A. fuliginosus*, the next most common species, *A. culicifacies*, was considered by the author as the main carrier, since it corresponded in distribution with the malarial areas, and was the only one which showed sporozoites in the salivary glands

In other parts of India (5) the introduction of rice cultivation is said to have rendered a once salubrious region intensely malarious

In the United States rice was extensively cultivated along the Atlantic coast before the Civil War. According to Carter (16), malaria was formerly intense there and was commonly attributed to the "miasm" arising from the rice fields Gamble (17) states that in 1817 the city of Savannah took measures to abandon the wet culture of rice in the vicinity of the city. A report of a special committee of the council, in recommending such legislation, stated that previous to the introduction of wet culture the city had enjoyed a relative immunity from autumnal diseases. Dry culture was introduced and it was claimed that this measure reduced the proportion of persons dying from "autumnal diseases" from 1 in 11 of population during the first period of three years of wet culture to 1 in 35 during the second period of three years under dry culture. Apparently diseases other than malaria were included under "autumnal fevers."

In Italy also malaria was formerly so intense in the rice regions that legislation was introduced to limit rice cultivation to certain districts (5).

Provided an efficient vector of malaria is bred in sufficient numbers, it would seem that the mere introduction of rice culture can not be expected to reduce the malaria rate unless there is a concomitant betterment of the social and hygienic status of the people. It has been suggested, however, that certain biological factors having to do with the mosquito carrier may have contributed to the decrease in malaria Some of these factors will be considered.

Alessandrini (5) suggests the hypothesis that a mosquito species, normally an efficient vector of malaria parasites, may become less susceptible to infection through the favorable conditions under which the larvæ develop in the rice fields He compared a series of larvæ bred in the rice fields with those bred in swamps, selecting only larvæ about to pupate, in order to get a comparable size, and found that those bred in the fields are, on the average, measurably larger The more vigorous adults emerging from larvæ of the rice fields may, then, be less susceptible to malaria, following the analogy observed generally, that the weaker individuals are more susceptible to disease Little experimental evidence has thus far been adduced by the author in support of his hypothesis

In 1922, at Stuttgart, Ark , we attempted to determine by infection experiments whether mosquitoes bred in rice fields are susceptible to malaria infection. Our results are given in Table 7 The mosquitoes tested were all *A. quadrimaculatus*, collected in the imago stage from shelters in the midst of the rice region. They were taken at a time of drought when it was unlikely that any had been bred elsewhere than in the rice fields. All the human carriers on which the mosquitoes were fed harbored crescents; only that of lot No 5 had, in addition, any benign tertian gametocytes. We have included in the table only those mosquitoes which were known to have taken blood from the carrier. They were fed but once on the carriers.

TABLE 7 —*Infection experiments with rice-field-bred Anopheles, at Stuttgart, Ark.*

Lot No	Carrier No	Date of feeding, 1922	Number of crescents per 100 leucocytes	Number of mosquitoes dissected	Per cent of mosquitoes infected	Average number of oöcysts per gut in positives	Remarks
1	1	Aug 22	1	13	0 0	0 0	
2	1	Aug 23	1 5	12	58 3	2 5	
3	1	Aug 25	1	11	45 4	1 4	Patient had taken a total of about 70 grains quinine
4	1	Aug 26	0 8	14	64 3	5 3	Sporozoites in oocysts in gut
5	2	Sept 1	1	2	0 0	0 0	Crescents plus a few B T. gametocytes also
6	3	do	8 5	8	0 0	0 0	

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It is shown in Table 7 that three of six lots had a high percentage of infected mosquitoes The average numbers of oocysts is small, as is common where the percentage of gametocytes is low. Older oöcysts often showed "black spores" or other signs of degeneracy. We found sporozoites, in some cases apparently tending to degeneracy, in the oocysts of lot No. 5, but in no case did we find them in the salivary glands, although we dissected 12 with positive gut 10 or more days after feeding, including 9 positives dissected 12 to 15 days after feeding. Such degeneracy of oocysts and lack of sporozoites might be taken as evidence in support of the theory of Alessandrini, but these findings are by no means uncommon in mosquito infection experiments, whatever the breeding place of the mosquito

We did another series of mosquito infection experiments in Louisiana. Here the experiments were made for a different purpose, and it was less certain that the *Anopheles* used were actually bred in rice fields Mosquitoes were fed on two crescent carriers, one with 2.8 and the other with 3.5 crescents per 100 leucocytes. Twenty-one *A. quadrimaculatus* and one *A. crucians* were dissected, all proving negative. On October of the same year, when the rice-field-bred *Anopheles* had presumably disappeared, we obtained positive infection experiments with *A quadrimaculatus* caught in the adult stage, and with both benign tertian and estivo-autumnal parasites.

Our Stuttgart experiments show clearly that *A. quadrimaculatus* bred in rice fields may be infected with parasites of estivo-autumnal malaria; and we are inclined to doubt whether any species may be sufficiently modified by breeding in such a locality as to decrease greatly its power of transmitting malaria Rice fields exhibit an infinite variety of breeding places, of which not all are exceptionally favorable to anopheline larvæ, and myriads of adults come from waters very similar to those found in ponds or swamps. Further, in considering any biological factor we must give due weight to the evidence that malaria was formerly plentiful in certain rice-growing regions. The possible effect of food, aeration, or any characteristic of the breeding place on the susceptibility of the mosquito is a matter of importance and worthy of study; but a long and careful series of experiments would be required to give any definite information, since we have to do with complicated and highly variable conditions.

Rice fields are usually drained in September and the number of *Anopheles* is greatly diminished in early October; but it seems unlikely that the October diminution could have much influence on the malaria rate, since adults of *A. quadrimaculatus* are abundant from June to September, inclusive, a period comprising the warmer months of the year.

Domestic animals may possibly decrease the transmission of malaria by diverting from human beings mosquitoes in their search for blood, but it is doubtful whether this factor is of greater weight in the rice country than elsewhere. We have demonstrated that *Anopheles* in the rice country will bite human beings in a stable crowded with domestic animals (18), and the Italian authors above quoted (5) have made a similar observation in Italy. The malaria rate is higher in the Arkansas rice country than in that of Louisiana, although domestic animals in the Arkansas region are quite as numerous as in the Louisiana rice country, and better housed.

Longevity of the mosquito is presumably important in respect to the probablity of its transmitting malaria. In the rice country of Arkansas we (19) have demonstrated by staining methods that adult *Anopheles* may live in the open during midsummer and under natural conditions as long as 25 days.

It has been suggested that thick woods may promote the prevalence of malaria, possibly through affording favorable shelters for *Anopheles* Such woods are plentiful in both the Arkansas and the Louisiana rice regions Further, malaria may be very intense in a very thinly wooded country, as Calabria, in southern Italy. In the survey of malaria in rice fields described by Kendrick (15), nearness to jungle seemed to have promoted malaria, but here the jungle may have furnished a breeding place for the chief vector of malaria, *A. culicifacies*.

Purdy (20) describes the great variation in the anopheline output of different California rice fields, some of which produce practically no *Anopheles*. He believes that there is a probability that such lack of breeding in certain fields is due to the presence there of a heavy growth of a blue-green alga, *Tolypothrix tenuis*. He did not find this alga abundant in the rice fields of Arkansas or Louisiana, nor could we find any amount of it there.

Chara robbinsii is very abundant in the Louisiana rice fields, but does not appear to deter the production of *Anopheles* (21).

THE HUMAN FACTOR IN THE PREVALENCE OF MALARIA IN THE RICE REGIONS

The history of malaria in rice regions and the study of the present status of the disease lead one to ascribe the relative freedom from malaria in rice regions to human rather than to mosquito factors. Certain of the human factors as they exist in the prairie rice regions will be briefly considered.

In neither Arkansas nor Louisiana is much hand labor employed in the cultivation of rice. The greater part of the preparation of the soil and the seeding, irrigation, and harvesting is done by machinery. Some hand labor is employed in weeding, but the number of such

laborers is inconsiderable Negro laborers are employed in rice production, but the greater part of them live in towns and go out to their work in the fields. There is no large rural negro population such as is found on the cotton plantations of the Mississippi Delta. A large proportion of the owners of rice farms live on their own land and cultivate it themselves. There is no large class of "croppers" poorly housed, or of "bunk-house" labor in the prairie rice country, whose presence tends to favor the transmission and spread of malaria. We should be on our guard, however, against placing too much stress on the labor or any other single human factor in the prevention of malaria. In the rice country of northern Italy malaria is comparatively insignificant, although a large amount of transient hand labor is employed in weeding and other work. On the sugar plantations of Louisiana, where malaria is not usually severe, the labor, chiefly negro, is usually housed in unscreened cabins clustered around the sugar "centrals."

The quality of the dwellings in the prairie rice region is somewhat above the average found in cotton-growing territories. In the Arkansas region screening is almost universal, although many of the houses are imperfectly screened. In Louisiana, screening is alsocommon, although by no means universal. Many rural houses are wholly without this protection.

The use of quinine as a preventive by well persons is uncommon in the rice regions, as everywhere else in the country, and early treatment of cases is about as common there as in any well-to-do country The Italian authors above quoted (5) hold that quinine has been an important factor in the diminution of malaria in Italy—not through prophylaxis in the sense of immunizing the well but through the prompt use of the drug in treatment Quinine is abundantly and cheaply available to the laborers and they are accustomed to take it at the first appearance of malaise.

The population of the prairie rice regions of both Arkansas and Louisiana has within recent years shown a notable increase—a factor which would tend to decrease the malaria rate, but not necessarily the amount of malaria (22). In both districts, however, a large proportion of the increment in population has come from the Northern States or from other localities relatively free from malaria and is composed of people presumably susceptible to the disease; it is unlikely, therefore, that the relatively rapid increase in population has of itself greatly diminished the malaria rate.

In summing up the social and hygienic conditions in the rice regions it may fairly be stated that the conditions of living of the rural population are generally superior to those found in the rural regions of other parts of the Southern States.

MALARIA IN CERTAIN REGIONS NOT RICE-PRODUCING

In considering the factors which may have affected the malaria rate in the rice region, we should keep in mind the fact that there has been a marked diminution of malaria in other parts of the United States in the presence of numbers of *Anopheles* apparently adequate for the transmission of malaria. During 1923 and 1924 we made surveys comparing the prevalence of malaria in certain regions bordering the upper and lower portions of Bayou Teche in southwest Louisiana. The results of these surveys, which appear in Table 8, illustrate the fact that, of two regions, neither of which is near rice fields, but both abounding in *Anopheles*, one may exhibit a low malaria rate and the other a relatively high one. The upper Teche is mainly devoted to cotton growing and the lower to sugar-cane. In the lower region *Anopheles* breed in a series of more or less weedy lakes, and in both regions in the swamps bordering the bayou. All biological conditions which may affect the mosquito-breeding places—presence of woods or of domestic animals—are similar in the two regions In the upper region we found some groups of negro renters among whom the malaria rate was relatively high In the lower region most of the negro plantation workers live in cabins near the sugar factories.

TABLE 8.—*Parasite index of certain regions bordering the upper and lower portions of Bayou Teche in Louisiana*

	Number examined	Per cent positive		Number examined	Per cent positive
Upper Teche			Lower Teche:		
9 colored schools	271	8 1	3 colored schools	95	0.0
10 white schools	310	3 9	5 sugar plantations	179	1 1
6 neighborhood surveys	239	11 7	1 lumber camp	31	0 0
2 plantations	83	9.6	1 neighborhood survey	25	0.0
Total	903	7.8	Total	330	0.6

In southern Alabama also we found a region where the malaria rate was very low in spite of the presence of *Anopheles*, both *A. quadrimaculatus* and *A. crucians*, in numbers apparently fully adequate for malaria transmission.

In none of the regions we have described—the prairie rice country, the Alabama region, or the Teche regions—had there been any systematic attempt to control malaria.

METHODS OF CONTROL OF MALARIA IN RICE REGIONS

Geiger and Purdy (23) used sawdust soaked with fuel oil (about 3 gallons of oil to a bushel of sawdust) as a larvicide in some experimental plots of rice. The mixture when sown broadcast destroyed 85 per cent of the larvæ without injuring the rice.

We have found Paris green effective as a larvicide in rice fields provided the plants are not so tall and thick as to intercept too large a proportion of the dust. We treated an area of about 2,000 square meters with one-fourth pound of Paris green mixed with dust. The dust was thrown into the air and distributed by the wind. Over 90 per cent of the larvæ were destroyed by a single treatment. In a second tract, where the rice was about 30 inches tall, thick, and blossoming, we got much poorer results with a similar treatment.

King and Bradley (24) made use of an airplane in dusting a tract of flooded rice with Paris green Five pounds of Paris green mixed with 100 pounds of Tripoli earth were distributed over a tract of 7½ acres, where the plants were about 20 inches in height. The distribution of the dust was thorough, except that one edge of the field was missed on account of a strong wind "For the whole 'cut' an estimated mortality of 73 per cent resulted, but with the exception of the one edge practically 100 per cent of the large larvæ were destroyed as well as the majority of the small ones."

In their experiments, as well as in ours, it was found that the quantity of Paris green necessary to kill anopheline larvæ is not injurious to the rice plants.

It appears that Paris green might be a practical means of destroying anopheline larvæ in a small group of rice fields, but where many thousands of acres have to be treated, as is the case in rice regions of Louisiana and Arkansas, the use of any known larvicide would be impracticable on account of the expense.

Destruction of larvæ by intermittent drainage has been proposed. However, such drainage always leaves many puddles which would continue to breed *Anopheles*. Further, as pointed out by Geiger and Purdy, drainage in these level plains is likely merely to transfer the larvæ to another locality where they will continue their development within flight distance of dwellings.

There is no question that the presence of *Gambusia* or other top-feeding minnows will reduce the numbers of larvæ in rice fields. Geiger and Purdy (23) state that they reduced by 70 per cent the numbers of mosquito larvæ in an experimental plot by the introduction of top-feeding minnows. We have noted that where water is pumped from wells into a field unstocked with *Gambusia*, breeding may be very intense. In July, 1924, we had an opportunity of testing the efficiency of top-feeding minnows in certain plots of the rice experimental farm at Crowley, La. Into certain plots, fish were introduced freely; from others they were excluded by means of weirs or other devices. A very few fish may have entered into the "fish-free" plots, but their numbers were inconsiderable. The incidence of anopheline larvæ in the "fish-containing" and the "fish-free" plots was compared by dipping. Seven hundred and seventy-seven dips

in the fish-containing plots gave an average of 0 63 anopheline larvæ or pupæ per dip and in the fish-free plots 460 dips gave an average of 1 03 larvæ or pupæ per dip Pupæ were more numerous in the fish-free plots, the ratio of pupæ to total larvæ being 1:61 in the presence of the fish and 1:23 in the fish-free plots By way of comparison, the incidence of anopheline larvæ in certain ditches well stocked with *Gambusia* was compared with that in similar ditches immediately adjacent and wholly fish-free The former gave an average of 1 54 larvæ or pupæ per dip (98 dips) and the latter an average of 2.75 per dip (36 dips). In these ditches the culicine mosquitoes were almost wholly destroyed by the fish, being apparently more accessible to the minnows than the *Anopheles*.

It is clear from these observations that one can not depend on fish as a means of control of *Anopheles* in breeding areas so immense as those afforded by rice fields, because sufficient larvæ will escape the fish to produce large numbers of adults; but in regions where top-feeding minnows are lacking, it would be worth while to introduce them, since once established in canals or puddles they may persist from year to year, and at least somewhat lower the production of mosquitoes of all sorts.

The prohibition by legislation of the cultivation of rice within a certain distance of towns, a measure which has been carried out in Italy and in other regions, would not be practical in the prairie regions of the United States Geiger and Purdy, by means of stained mosquitoes, found that *A quadrimaculatus* will spread a distance of a mile or more from rice fields. Barber and Hayne (19), by means of a survey of daytime resting places, also found that *Anopheles* in effective numbers would spread a distance of a mile from the rice fields With towns and villages as thick as they are in some portions of Louisiana, therefore, a large proportion of the land, often little fit for anything but rice, would have to be abandoned or only partially used.

Screening and quinine, already mentioned, are certainly among the best of antimalaria measures in the rice country, as elsewhere. Education as regards the early and thorough treatment of attacks and as to the proper use of screens and other mechanical protection against *Anopheles*, is, of course, to be encouraged in every way. The elimination of carriers is important in any locality. Sixty-four persons in Louisiana whom we found infected with malaria parasites in 1923 were reexamined in 1924, and 28.1 per cent were again found positive. The general parasite index of the region during 1924, as indicated by the examination of 1,173 blood specimens of school children, was only 3.7 per cent.

Destruction of adult mosquitoes in houses may be an excellent measure, especially in case of an epidemic (12) (13). The disposition

of animals at strategic points in order to intercept or divert mosquito attacks, a measure practiced in Java (12), would hardly be practical in the prairie rice country of the United States With the immense numbers of *Anopheles* present even a human cordon seems unavailing. We found that large numbers of *A. quadrimaculatus* will penetrate a thickly populated town for a distance of at least a quarter of a mile.

DISCUSSION

In considering the effect of the cultivation of rice on malaria we must keep in mind the fact that the diminution of malaria or the maintenance of a comparatively low rate of the disease in spite of the presence of numerous *Anopheles* is a phenomenon by no means peculiar to the rice regions, although it is more striking there on account of the large numbers of *Anopheles* present. Further, in some parts of the world, high endemic and epidemic malaria may occur in rice regions, and the history of malaria in some rice regions now relatively exempt from the disease indicates that malaria was formerly intense in them. Apparently the amelioration in malaria prevalence in *Anopheles*-infested regions occurs only where improved agriculture or other social factor has brought about a general economic improvement in the condition of the people, an improvement which may have been the more rapid and complete where rice cultivation was introduced into swamps or into a prairie country little adapted to other sorts of crops It would seem that, with even a moderate betterment of social conditions, malaria in the United States tends to disappear or become relatively inconsiderable provided such improvement is general. Or, to state the proposition in another way, the maintenance of high endemic malaria requires a permanent reservoir of infection such as is furnished by a considerable body of people lacking proper housing, proper food, and adequate medical treatment. Now that pioneer conditions of life have in most parts of the country disappeared or have become modified, it is usually a certain type of renter class which provides the necessary reservoir of infection. It is well known that the impoverishment of a people or the introduction into it of unprotected temporary labor or soldiers may bring about an increase in malaria. The economic factor, then, is an important one and should receive due emphasis.

We do not wish to discourage the use of antimosquito measures or to regard such as unimportant. In regions where it is feasible to eliminate or greatly reduce *Anopheles*, such measures should be practiced; but where the *Anopheles* link in the chain of transmission of malaria is too strong to break, conditions are still far from discouraging, as is shown by the prairie rice regions of the United States where malaria remains at a comparatively low level without any conscious antimalaria work and in spite of an abundance of *Anopheles*. In

malaria work we must decide where to expend the greatest effort, a problem which must vary greatly in different regions.

It would seem that the study of regions of the type of the prairie rice country might afford malaria workers some hints as to means suitable for antimalaria work generally; but when we come to analyze the conditions found there, or try to evaluate the different factors comprised under the term "social improvement," it is difficult to determine which of them has had the most effect on malaria reduction. Screening and other precautions against mosquito bites, although by no means universally practiced in the rice regions of the United States, and employed but little in such regions of Italy, have doubtless been of direct influence against malaria. The use of quinine and medical treatment of malaria in general have probably improved Less direct measures, such as improvement in food, housing, hours of labor, water supply, and the like, have doubtless been of weight, since all tend to maintain a higher physical level and to prevent relapse of malaria attacks It would seem that nearly every phase of economic improvement has had some effect on the reduction of malaria

The work of the health officer in regions where the presence of numerous *Anopheles* is inevitable is, of course, limited. He may encourage screening and general betterment of tenant houses, a work which is already under way in certain States. He may make quinine as abundantly and cheaply available as possible Education of the people may encourage the proper use of screens and the early and thorough use of quinine. In certain malarious regions the inhabitants may be unduly disposed to await relief from the outside. In such regions the lesson of the prairie rice country may be applied and the people taught that a good part of the remedy lies in themselves, and that a betterment of conditions of living may bring about a considerable amelioration in malaria, even though mosquitoes are not immediately abolished.

Irrigated regions where a high anopheline rate is inevitable should be kept under hygienic supervision, even though the malaria rate be inconsiderable. Such regions should be regarded as being in a state of less stable equilibrium, and possible epidemics should be looked out for and detected as early as possible. But in the prairie rice regions of the southern United States conditions are now such that malaria should be no deterrent to the prospective immigrant that is willing to take comparatively simple precautions to protect himself. Among such precautions, screening, and proper treatment in case of an attack probably stand first.

SUMMARY

In the prairie rice region of the southern United States conditions favor a large production of *Anopheles* *A quadrimaculatus*, an efficient vector of malaria, is the predominant species, and *Anopheles* are very abundant from June to September, inclusive, a period of sufficiently high temperature to favor the transmission of malaria. There does not appear to be any biological factor having to do with the mosquito or its breeding places which would prevent these mosquitoes from being an efficient vector of malaria Malaria of both the estivo-autumnal and the benign tertian types is present in the rice region; but the rate is low and the malaria problem is not a serious one Attacks of malaria, when they occur, are usually comparatively mild, and deaths from the disease are rare The economic and hygienic status of the rural population in the rice region is relatively good, and this high general status is probably the most important factor in keeping the malaria rate at a comparatively low level. Conditions are such in the prairie rice regions that the fear of malaria should be no deterrent to immigration, provided simple precautions are taken by the immigrant, but, like any region heavily infested with *Anopheles*, the prairie rice country should be kept under hygienic supervision

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REFERENCES

(1) Carter, H R : Pub Health Bull. No 104, p. 88. (1919.)
(2) Geiger, J C , Purdy, W. C , Tarbett, R. E.: Jour Am. Med. Assn., LXXII, 844–847. (1919)
(3) Geiger, J. C , Purdy, W. C., Bates, L · Jour Am. Med. Assn., LXXI, 1283–1285. (1918.)
(4) Barber, M. A , and Mayne, B.. South Med. Jour., XVII, 583-590. (1924.)
(5) Giardina, G , Novelli, N , Alessandrini, G., and Sampietro, G.: La Risicoltura e la Malaria Roma, Provveditorato Generale Dello Stato Libreria, 1925
(6) Herms, W. B.: Month. Bull Calif. State Board of Health, December, 1919, p 183.
(7) Lenert L. G · Pub. Health Bull. No 137, p. 13–23. (1922)
(8) Eugling, M.: Arch. F. Hyg., Munchen & Berlin, XCII, 244–250. (1923.)
(9) Nocht, B.. Beihefte z. Arch. f. Schiffs u. Tropen-Hyg., XXX, No. 1, 1–17. (1926.)
(10) Watson, M : Tr. Roy. Soc. Trop Med. and Hyg., XVIII, 147. (1924.)
(11) Barber, M. A., Raquel, A., Guzman, A., Rosa, A. P.: Philippine Jour. Sc., X, No. 3, Sec. B , 177–247. (1915.)

(12) Walch, E W. South Med. Jour, XVIII, 434–438 (1925)
(13) LePrince, J. A Pub Health Rep, 41, 1220–1226. (1926.)
(14) Bentley, C A: Malaria and Agriculture in Bengal. Calcutta, Secretariat Book Depot, 1925
(15) Kendrick, W. H Report on Malaria in the Central Provinces, 1912–1913. Nagpur, Government Press, 1914
(16) Carter, H R. Pub Health Bull No 104, p 87 (1919)
(17) Gamble, T., jr A History of the City Government of Savannah Savannah, Ga, pp. 141–143, 200, 201, and 219 (1900.)
(18) Barber, M. A, and Hayne, T. B Pub Health Rep, 39, 139–144 (1924.)
(19) Barber, M A, and Hayne, T B Pub Health Rep, 39, 195–203 (1924)
(20) Purdy, W C. Pub. Health Bull No 145 (1924)
(21) Barber, M A Pub Health Rep, 39, 611–615 (1924)
(22) Ross, R: The Prevention of Malaria. London, 1911
(23) Geiger, J. C., and Purdy, W. C Jour. Am Med. Assn, 1919, LXXII, 774–779
(24) King, W V, and Bradley, G H. Department Circular No 367, U. S. Dept Agr, 1926.

PUBLIC HEALTH ENGINEERING ABSTRACTS

The 1926 Tourist Camp Survey.—Lewis S Finch, director, water and sewage department *Monthly Bulletin*, Indiana State Board of Health, vol 29, No 8, August, 1926, pp. 117–118. (Abstract by I. W. Mendelsohn.)

Supervision of tourist camps in Indiana was begun by the State board of health in 1923. At present there are about 325 such camps.

From May 20, 1926, to August 1, 1926, 227 camps were inspected. The inspector takes samples of all camp water supplies, investigates the methods of sewage and garbage disposal, and discusses unsatisfactory conditions with the owner or operator. When the laboratory examination of the water sample is completed, a report of the survey with recommendations is sent to the camp owner and to the health official in whose district the camp is located

The work in the past has been productive of good results, as shown in the following table:

Sanitary conditions of Indiana tourist camps inspected

Item	1923		1924		1925	
	Total number	Per cent good	Total number	Per cent good	Total number	Per cent good
Water supplies	99	74	174	74	184	81
Sewage disposal	97	15	181	48	186	84
Garbage disposal	93	16	174	71	192	82

Camp Sanitation is an Important Public Health Problem.—Charles G Cox, division of sanitation, New York State Department of Health, Albany, N Y *The Nation's Health*, vol. 8, No. 7, July 15, 1926, pp 459–461 (Abstract by Paul S. Fox)

Close cooperation between State divisions of sanitary engineering and local health officers is important, because most camp sanitation problems are of an engineering nature

Camp site—A camp is best located on western shore of stream or lake, since timbered section offers shade from hot afternoon sun. Soil should be porous and dry. Site should be free from mosquito breeding places

Water supply—Drinking water should be obtained from unpolluted springs or wells Larger camps sometimes maintain their own filter plants. Camps should be supplied with hypochlorite for emergency sterilization. Dual water supplies should not be allowed.

Sewage disposal—Flush toilets should be used whenever possible. Sanitary privies or chemical toilets may be used.

Garbage disposal.—Garbage should be disposed of daily by either burying or burning.

Milk supply.—Pasteurized milk should be provided, and, if possible, it should come from a tuberculin-tested herd. Milk should be stored in properly sterilized containers and kept at low temperatures.

The sanitary condition of camps depends not only upon the character of equipment but upon the degree of supervision by the camp authorities.

Administrative Phases of Stream-Pollution Control.—J E Monger, State director of health, Columbus, Ohio. *American Journal of Public Health*, vol. 16, No. 8, August, 1926, pp. 788–804. (Abstract by J. H. O'Neill.)

The effects of pollution may differ in various communities, but in general they may be classified somewhat as follows: (1) The menace of a contaminated public water supply; (2) the creation of nuisance otherwise affecting public health and comfort; (3) the damage to property with resulting depreciation of values; (4) the killing of fish and other natural stream life; (5) the damage to livestock; (6) the impairment of recreational facilities and destruction of bathing places; (7) the damage to public and private river and harbor improvements and navigation.

The general administrative features to be invoked in dealing with this problem are common to all States, and the necessity for meeting the problem is present in all of them. The underlying principles will vary but little; but variants, such as the quantity and quality of the various polluting agencies, the proximity of these points of discharge to water-supply intakes, and other important factors, render

a hard-and-fast consideration of administrative policies difficult The paper deals principally with the general underlying principles employed in Ohio

The Ohio law gives the State health department the same control over industrial wastes that it had over municipal wastes. It gives the public health council power to make regulations designed to meet the varying needs of different watersheds It limits the pollution problem to its present dimensions and permits the orderly consideration of each individual watershed according to the necessities of the case An important feature of the law is that permitting the coordination of municipal and industrial effort.

The things necessary to meet the problem of a future uncontaminated water supply are summarized as follows: Drive home its necessity and importance; develop a civic and industrial conscience that will not permit indiscriminate destruction of a great public asset; exercise a common sense degree of patience pending the development of economically possible methods of meeting the problem.

The question of the advisability of Federal legislation at the present time is a debatable one In dealing with interstate problems the joint actions of the respective States and the cooperation of Federal agencies is most important (Abstractor's note: The above paper is part of a symposium on the subject presented at the meeting of the American Public Health Association at Atlantic City, May 20, 1926. The discussion published with the papers contains much of interest)

Administration Problems in the Control of Pollution in Streams.—George W Fuller. *American Journal of Public Health,* vol. 16, No. 8, August 1926. pp. 777–781. (Abstract by J H. O'Neill.)

Although much progress has been made in the last 30 years, particularly with reference to the quality of public water supplies, the problem is far from complete solution. Gross nuisances in our streams abound and new ones come to affect those corrected. It is pointed out that the lack and failure of control of stream pollution can not be attributed to deficiencies in engineering knowledge or to the absence of legal and legislative measures for preventing pollution.

The answer to the question "Why is not stream pollution under better control?" is to be found in the shortcomings of present administrative facilities for carrying out suitable remedies designed to meet the demands of legislative acts, when interpreted in the light of the needs of the public from health and welfare standpoints Popular support and adequate funds are needed for effective work.

There are two types of administrative problems: One relating to the local or decentralized or internal problems for the particular locality in question, the other having to do with group, district,

regional, or Federal type of control. A discussion is given of each group.

A Model Milk Pasteurization Plant.—Anon. *The Medical Officer*, vol 36, No 2, July 10, 1926, pp 19–20 (Abstract by H A. Kroeze)

This article states that while Great Britain has been slow to adopt the methods of milk production and distribution which have been perfected in some of the cities of the United States, it is not yet generally realized what progress has been made in this direction during the last few years In London especially the great organization known as United Dairies (Ltd) has established standards of efficiency in the handling of milk supplies that would have been thought unattainable only a few years ago

On June 29 the new pasteurizing plant at Valley Farm, Streatham, was opened. Competent judges, both American and European, have declared this plant as second to none in either hemisphere. The article gives a brief description of the plant, and methods of receiving, pasteurizing, and bottling of the milk. Of particular interest are the methods used for washing bottles and cans—each utensil being washed for 20 minutes by an elaborate process—a description of which is given.

A brief note is made of the arrangements for the welfare of the staff, which are on a scale never before attempted in the dairy trade. These provide for rest rooms, two restaurants (men and women), bath rooms, drying rooms for roundsmen's clothes, laundry, and playing fields. There are also large and fully equipped stables with accommodation for 100 vans and horses.

DEATHS DURING WEEK ENDED OCTOBER 23, 1926

Summary of information received by telegraph from industrial insurance companies for week ended October 23, 1926, and corresponding week of 1925. (From the Weekly Health Index, October 27, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Oct. 23, 1926	Corresponding week, 1925
Policies in force	65, 641, 744	61, 606, 572
Number of death claims	11, 169	11, 350
Death claims per 1,000 policies in force, annual rate	8. 9	9. 6

Deaths from all causes in certain large cities of the United States during the week ended October 23, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, October 27, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Oct 23, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Oct 23, 1926[2]
	Total deaths	Death rate[1]		Week ended Oct 23, 1926	Corresponding week, 1925	
Total (65 cities)	6,279	11.3	12.0	750	765	[3] 62
Akron	53			6	1	65
Albany[4]	34	14.9	12.8	4	3	83
Atlanta	77			6	7	
White	35			3		
Colored	42	(5)		3		
Baltimore[4]	196	12.6	14.1	27	24	82
White	140			16		60
Colored	56	(5)		11		175
Birmingham	78	19.3	12.7	8	8	
White	37			4		
Colored	41	(5)		4		
Boston	206	13.6	12.4	33	24	92
Bridgeport	28			3	3	51
Buffalo	138	13.2	16.2	18	10	75
Cambridge	27	11.5	10.0	6	3	107
Camden	26	10.3	13.8	5	6	84
Canton	20	9.5	9.3	6	1	182
Chicago[4]	601	10.3	10.4	58	73	51
Cincinnati[4]	122	15.5	15.8	11	10	69
Cleveland	175	9.5	10.1	19	18	49
Columbus	73	13.4	13.6	14	2	131
Dallas	49	12.8	12.9	11	11	
White	43			10		
Colored	6	(5)		1		
Dayton	37	10.9	10.9	4	8	66
Denver	77	14.1	17.1	10	12	
Des Moines	25	8.9	10.7	1	1	17
Detroit	271	11.0	10.8	52	47	85
Duluth	29	13.4	11.8	2	7	46
El Paso	18	8.6	11.4	3	4	
Erie	29			4	5	78
Fall River[4]	19	7.6	8.9	4	5	63
Flint	18	6.9	8.0	6	4	102
Fort Worth	27	8.9	6.2	5	3	
White	21			4		
Colored	6	(5)		1		
Grand Rapids	32	10.7	13.9	2	4	20
Houston	46			5	2	
White	33			3		
Colored	13	(5)		2		
Indianapolis	88	12.5	14.7	8	12	51
White	78			7		51
Colored	10	(5)		1		57
Jersey City	55	9.0	11.1	5	14	38
Kansas City, Kans	35	15.6	15.3	8	6	155
White	29			7		156
Colored	6	(5)		1		152
Kansas City, Mo	67	9.3	11.1	3	8	
Los Angeles	196			16	24	45
Louisville	98	16.4	15.5	8	11	68
White	73			7		68
Colored	25	(5)		1		70
Lowell	33			2	0	39
Lynn	15	7.5	7.6	2	2	53
Memphis	44	13.0	16.1	6	4	
White	22			3		
Colored	22	(5)		3		
Milwaukee	91	9.2	10.2	14	17	66
Minneapolis	80	9.6	9.4	3	3	17

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births Cities left blank are not in registration area for births

[3] Data for 63 cities

[4] Deaths for week ended Friday, Oct 22, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31, Baltimore, 15, Birmingham, 39, Dallas, 15, Fort Worth, 14, Houston, 25, Indianapolis, 11, Kansas City, Kans, 14, Louisville, 17, Memphis, 38, Nashville, 30, New Orleans, 26, Norfolk, 38, Richmond, 32, and Washington, D C, 25.

Deaths from all causes in certain large cities of the United States during the week ended October 23, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, October 27, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Oct 23, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate week ended Oct 23, 1926
	Total deaths	Death rate		Week ended Oct 23, 1926	Corresponding week, 1925	
Nashville [4]	45	17.1	16.5	4	8	
White	22			2		
Colored	23	(5)		2		
New Bedford	30			6	3	104
New Haven	33	9.5	12.2	0	4	0
New Orleans	126	15.7	19.0	11	9	
White	85			5		
Colored	41	(5)		6		
New York	1,253	11.0	11.1	137	116	56
Bronx Borough	168	9.7	9.2	11	14	37
Brooklyn Borough	393	9.1	9.9	43	41	14
Manhattan Borough	543	15.1	14.9	67	76	74
Queens Borough	106	7.2	7.2	14	12	64
Richmond Borough	43	15.7	8.7	2	3	35
Newark, N J	73	8.9	11.2	10	11	48
Norfolk	37	11.1	8.6	3	5	61
White	19			0		0
Colored	18	(5)		3		150
Oakland	59	11.8	10.5	6	5	70
Oklahoma City	28			4	6	
Omaha	43	10.4	16.8	6	5	64
Paterson	32	11.7	10.3	2	2	34
Philadelphia	473	12.3	13.1	62	59	83
Pittsburgh	147	12.0	13.7	25	24	83
Portland, Oreg	53			5	6	50
Providence	51	9.7	12.3	6	8	50
Richmond	43	11.9	10.4	6	8	75
White	26			1		19
Colored	17	(5)		5		173
Rochester	48	7.8	12.7	6	12	48
St Louis	198	12.4	12.2	19	13	
St Paul	64	13.5	11.0	5	4	44
Salt Lake City [4]	25	9.8	9.2	3	1	46
San Antonio	43	10.9	13.4	5	5	
San Diego	26	12.3	14.3	1	0	21
San Francisco	103	9.5	14.0	3	9	18
Schenectady	18		10.1	0	2	0
Seattle	65			1	2	10
Somerville	11	5.7	13.7	0	4	0
Spokane	35	16.7	14.4	3	2	70
Springfield, Mass	30	10.8	11.7	2	3	31
Syracuse	42	11.9	12.0	9	6	111
Toledo	53	9.4	13.6	11	11	106
Trenton	27	10.5	11.1	2	5	34
Utica	34	17.2	13.3	5	3	114
Washington, D C	118	11.7	14.0	15	11	86
White	78			12		100
Colored	40	(5)		3		55
Waterbury	15			0	5	0
Wilmington, Del	22	9.3	12.0	1	3	22
Worcester	46	12.4	13.9	8	7	96
Yonkers	15	6.7	7.3	0	1	0
Youngstown	30	12.5	8.2	8	4	101

[4] Deaths for week ended Friday, Oct 22, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta, 31, Baltimore, 15; Birmingham, 39, Dallas, 15; Fort Worth, 14, Houston, 25; Indianapolis, 11, Kansas City, Kans., 14; Louisville, 17, Memphis, 38, Nashville, 30; New Orleans, 26, Norfolk, 38, Richmond, 32, and Washington, D. C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended October 30, 1926

ALABAMA

	Cases
Chicken pox	4
Diphtheria	75
Influenza	32
Malaria	105
Measles	6
Mumps	7
Pellagra	4
Pneumonia	36
Scarlet fever	38
Tetanus	1
Trachoma	7
Tuberculosis	104
Typhoid fever	45
Typhus fever	1
Whooping cough	14

ARIZONA

	Cases
Cerebrospinal meningitis	1
Diphtheria	8
Measles	36
Mumps	1
Scarlet fever	12
Trachoma	6
Tuberculosis	8
Typhoid fever	3
Whooping cough	3

ARKANSAS

	Cases
Chicken pox	7
Diphtheria	17
Influenza	71
Malaria	83
Measles	1
Mumps	1
Paratyphoid fever	3
Pellagra	6
Scarlet fever	15
Smallpox	2
Tuberculosis	9
Typhoid fever	30
Whooping cough	10

COLORADO

	Cases
Cerebrospinal meningitis	1
Chicken pox	13
Diphtheria	16
Measles	8
Mumps	2
Pneumonia	2
Scarlet fever	42
Tuberculosis	37
Typhoid fever	7
Whooping cough	7

CONNECTICUT

	Cases
Chicken pox	70
Diphtheria	28
Dysentery (bacillary)	1
German measles	1
Influenza	5
Lethargic encephalitis	1
Measles	11
Mumps	8
Pneumonia (broncho)	15
Pneumonia (lobar)	16
Poliomyelitis	4
Scarlet fever	48
Septic sore throat	76

DELAWARE

	Cases
Chicken pox	6
Diphtheria	8
Measles	3
Pneumonia	2
Scarlet fever	25
Tuberculosis	1
Typhoid fever	12
Whooping cough	2

FLORIDA

	Cases
Chicken pox	2
Diphtheria	70
Dysentery (amebic)	1
Influenza	5

FLORIDA—continued

	Cases
Malaria	11
Measles	1
Mumps	4
Pneumonia	1
Scarlet fever	14
Smallpox	6
Tetanus	1
Tuberculosis	17
Typhoid fever	7
Whooping cough	5

GEORGIA

	Cases
Chicken pox	5
Dengue	3
Diphtheria	91
Dysentery	3
Hookworm disease	2
Influenza	53
Malaria	80
Measles	4
Mumps	6
Paratyphoid fever	1
Pellagra	1
Pneumonia	29
Scarlet fever	24
Septic sore throat	24
Smallpox	11
Tuberculosis	20
Typhoid fever	31
Typhus fever	2
Whooping cough	9

IDAHO

	Cases
Chicken pox	5
Diphtheria	5
Measles	6
Mumps	1
Pneumonia	1
Scarlet fever	30
Septic sore throat	2
Typhoid fever	2
Whooping cough	2

ILLINOIS

	Cases
Cerebrospinal meningitis—Cook County	1
Chicken pox	239
Diphtheria	130
Influenza	24
Lethargic encephalitis.	
Cook County	1
Menard County	1
Measles	219
Mumps	35
Pneumonia	198
Poliomyelitis—Cook County	4
Scarlet fever	211
Smallpox	8
Tuberculosis	269
Typhoid fever	85
Whooping cough	211

IOWA

	Cases
Chicken pox	35
Diphtheria	31
German measles	1

[1] See page 25–59.

IOWA—continued

	Cases
Measles	3
Mumps	3
Scabies	2
Scarlet fever	44
Smallpox	5
Tuberculosis	3
Typhoid fever	6
Whooping cough	15

KANSAS

	Cases
Cerebrospinal meningitis—Coffeeville	1
Chicken pox	79
Diphtheria	63
Influenza	4
Measles	42
Mumps	7
Pneumonia	18
Poliomyelitis	
Inman	1
Smith Center	1
Stafford	1
Scarlet fever	57
Septic sore throat	1
Smallpox	5
Typhoid fever	12
Whooping cough	37

LOUISIANA

	Cases
Bubonic plague (imported)[1]	2
Diphtheria	37
Influenza	8
Leprosy	1
Malaria	56
Pneumonia	19
Scarlet fever	10
Tuberculosis	39
Typhoid fever	24

MAINE

	Cases
Chicken pox	63
Diphtheria	6
German measles	4
Influenza	14
Measles	70
Mumps	1
Pneumonia	7
Poliomyelitis	1
Scarlet fever	20
Septic sore throat	1
Tuberculosis	8
Typhoid fever	4
Whooping cough	37

MARYLAND[2]

	Cases
Chicken pox	32
Diphtheria	42
Dysentery	4
German measles	1
Influenza	8
Lethargic encephalitis	1
Measles	4
Mumps	8
Paratyphoid fever	2
Pellagra	1

[2] Week ended Friday.

MARYLAND—continued

Disease	Cases
Pneumonia (broncho)	18
Pneumonia (lobar)	18
Poliomyelitis	1
Scarlet fever	45
Septic sore throat	1
Tuberculosis	26
Typhoid fever	70
Vincent's angina	4
Whooping cough	70

MASSACHUSETTS

Disease	Cases
Cerebrospinal meningitis	2
Chicken pox	180
Conjunctivitis (suppurative)	6
Diphtheria	92
German measles	8
Influenza	8
Lethargic encephalitis	2
Measles	39
Mumps	73
Ophthalmia neonatorum	40
Pellagra	1
Pneumonia (lobar)	58
Poliomyelitis	6
Scarlet fever	246
Septic sore throat	4
Tuberculosis (pulmonary)	91
Tuberculosis (other forms)	23
Typhoid fever	13
Whooping cough	97

MICHIGAN

Disease	Cases
Diphtheria	211
Measles	20
Pneumonia	71
Scarlet fever	204
Smallpox	14
Tuberculosis	231
Typhoid fever	21
Whooping cough	134

MISSISSIPPI

Disease	Cases
Diphtheria	30
Poliomyelitis	1
Scarlet fever	20
Smallpox	1
Typhoid fever	19

MISSOURI

(Exclusive of Kansas City)

Disease	Cases
Chicken pox	33
Diphtheria	68
Epidemic sore throat	1
Influenza	16
Malaria	1
Measles	14
Scarlet fever	93
Smallpox	2
Trachoma	8
Tuberculosis	22
Typhoid fever	17
Whooping cough	18

MONTANA

Disease	Cases
Cerebrospinal meningitis	2
Chicken pox	25
Diphtheria	4
Measles	84
Mumps	1
Scarlet fever	67
Smallpox	3
Trachoma	2
Typhoid fever	10
Whooping cough	4

NEBRASKA

Disease	Cases
Chicken pox	18
Diphtheria	21
German measles	2
Measles	1
Mumps	5
Pneumonia	1
Poliomyelitis	1
Scarlet fever	18
Smallpox	3
Tuberculosis	1
Whooping cough	11

NEW JERSEY

Disease	Cases
Cerebrospinal meningitis	2
Chicken pox	43
Diphtheria	86
Influenza	1
Measles	7
Paratyphoid fever	1
Pneumonia	66
Poliomyelitis	1
Scarlet fever	100
Trachoma	1
Typhoid fever	23
Whooping cough	101

NEW MEXICO

Disease	Cases
German measles	1
Malaria	1
Pneumonia	4
Scarlet fever	16
Tuberculosis	29
Typhoid fever	23
Whooping cough	4

NEW YORK

(Exclusive of New York City)

Disease	Cases
Anthrax	1
Cerebrospinal meningitis	1
Chicken pox	242
Diphtheria	82
Dysentery	1
German measles	22
Malaria	1
Measles	224
Mumps	62
Ophthalmia neonatorum	3
Pneumonia	144
Poliomyelitis	12
Scarlet fever	89
Septic sore throat	1
Smallpox	11

NEW YORK—continued

	Cases
Tetanus	1
Typhoid fever	10
Vincent's angina	21
Whooping cough	203

NORTH CAROLINA

Chicken pox	24
Diphtheria	217
German measles	5
Malaria	3
Measles	51
Poliomeylitis	2
Scarlet fever	99
Septic sore throat	2
Smallpox	13
Typhoid fever	35
Whooping cough	220

OREGON

Cerebrospinal meningitis	1
Chicken pox	24
Diphtheria	17
Influenza	10
Measles	17
Mumps	7
Pneumonia	[3] 7
Poliomyelitis	1
Scarlet fever	37
Septic sore throat	1
Smallpox	29
Tuberculosis	[3] 4
Typhoid fever	2
Whooping cough	3

SOUTH DAKOTA

Chicken pox	2
Diphtheria	1
Measles	8
Scarlet fever	16
Typhoid fever	1
Whooping cough	6

TENNESSEE

Chicken pox	1
Diphtheria	63
Influenza	29
Malaria	24
Measles	5
Mumps	2
Pellagra	8
Pneumonia	10
Scarlet fever	53
Smallpox	3
Tuberculosis	14
Typhoid fever	59
Whooping cough	35

TEXAS

Chicken pox	1
Diphtheria	40
Influenza	20
Mumps	1
Pneumonia	3
Scarlet fever	19

[3] Deaths.

TEXAS—continued

	Cases
Tuberculosis	10
Typhoid fever	14
Whooping cough	18

UTAH

Chicken pox	38
Diphtheria	7
German measles	19
Influenza	3
Measles	138
Pneumonia	4
Poliomyelitis—Monroe	1
Scarlet fever	19
Smallpox	2
Typhoid fever	3
Whooping cough	9

VERMONT

Chicken pox	23
Diphtheria	3
Measles	82
Mumps	14
Scarlet fever	1
Whooping cough	35

VIRGINIA

Smallpox	1

WASHINGTON

Cerebrospinal meningitis:	
Douglas County	1
Spokane	1
Chicken pox	75
Diphtheria	23
German measles	3
Measles	33
Mumps	32
Pneumonia	1
Scarlet fever	50
Septic sore throat	1
Smallpox	11
Tuberculosis	2
Typhoid fever	16
Whooping cough	11

WEST VIRGINIA

Cerebrospinal meningitis—Wood County	1
Chicken pox	16
Diphtheria	54
Influenza	19
Measles	8
Poliomyelitis—Morgantown	2
Scarlet fever	84
Smallpox	2
Tuberculosis	24
Typhoid fever	62
Whooping cough	55

WYOMING

Chicken pox	12
Diphtheria	1
Measles	13
Mumps	1
Scarlet fever	14
Whooping cough	2

Reports for Week Ended October 23, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	5
Diphtheria	18
Pneumonia	19
Scarlet fever	15
Tuberculosis	13
Whooping cough	7

NORTH DAKOTA

	Cases
Chicken pox	12
Diphtheria	6
German measles	6
Lethargic encephalitis	1
Measles	93
Mumps	9
Paratyphoid fever	1
Pneumonia	3
Scarlet fever	39
Smallpox	11
Trachoma	3

NORTH DAKOTA—continued

	Cases
Tuberculosis	5
Typhoid fever	13
Whooping cough	22

SOUTH CAROLINA

	Cases
Chicken pox	10
Dengue	2
Diphtheria	101
Hookworm disease	23
Influenza	217
Malaria	720
Measles	17
Paratyphoid fever	4
Pellagra	39
Poliomyelitis	3
Scarlet fever	16
Smallpox	2
Tuberculosis	28
Typhoid fever	54
Whooping cough	31

PLAGUE ON VESSEL AT NEW ORLEANS

The Japanese steamship *Manila Maru* from Pacific ports, Buenos Aires, Argentina, and Rio de Janeiro and Santos, Brazil, arrived at New Orleans on October 24 with two human cases of bubonic plague. The patients were removed to the United States Marine Hospital, where one patient subsequently died. Diagnosis in both cases was confirmed clinically and bacteriologically. The steamer is now in process of complete deratization, which requires several fumigations during the discharge of cargo to prevent live rats from remaining in the cargo. Fumigations to date have yielded 130 rats, of which 6 of the species *alexandrinus* have been found to be infected. After complete discharge, the vessel will be given thorough fumigation throughout and will be surveyed by a service employee, an expert in ship rat-proofing, sent especially from New York for this purpose, in order to locate the breeding places of rats on the ship and permanently to eliminate all these in so far as possible. The vessel is bound for Galveston, Cristobal, and San Pedro.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
July, 1926										
Pennsylvania	5	514	--------	0	2,979	0	3	755	2	113
September, 1926										
Alabama	2	111	45	529	57	45	3	66	15	393
California	13	503	60	11	1,289	3	35	425	34	127
Colorado	0	90	--------	--------	22	1	1	54	14	52
Florida	0	80	6	31	27	3	1	19	39	48
Idaho	1	28	1	0	9	0	4	48	2	27
Illinois	11	273	93	15	236	2	23	376	26	308
Kansas	6	48	17	3	37	1	21	139	8	124
Maine	0	13	7	0	82	0	1	81	0	33
Mississippi	0	145	1,330	12,262	246	509	6	36	4	418
Missouri	0	93	12	7	49	--------	5	157	8	162
Montana	3	29	--------	--------	18	--------	0	71	9	16
North Carolina	1	432	--------	106	62	--------	16	213	30	335
Oklahoma [1]	1	122	146	707	36	40	7	86	2	535
South Dakota	0	9	3	--------	90	--------	2	94	0	11
Washington	10	110	6	--------	39	--------	1	159	59	62

[1] Exclusive of Oklahoma City and Tulsa.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended October 16, 1926, 37 States reported 1,858 cases of diphtheria. For the week ended October 17, 1925, the same States reported 1,742 cases of this disease. One hundred cities, situated in all parts of the country and having an aggregate population of more than 30,260,000, reported 960 cases of diphtheria for the week ended October 16, 1926. Last year for the corresponding week they reported 855 cases. The estimated expectancy for these cities was 1,133 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-five States reported 1,408 cases of measles for the week ended October 16, 1926, and 766 cases of this disease for the week ended October 17, 1925. One hundred cities reported 253 cases of measles for the week this year, and 386 cases last year.

Poliomyelitis.—The health officers of 37 States reported 66 cases of poliomyelitis for the week ended October 16, 1926. The same States reported 180 cases for the week ended October 17, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-six States—this year, 2,064 cases; last year, 1,563 cases; 100 cities—this year, 752 cases; last year, 692 cases; estimated expectancy, 639 cases.

Smallpox.—For the week ended October 16, 1926, 37 States reported 119 cases of smallpox. Last year for the corresponding week they reported 111 cases. One hundred cities reported smallpox for the week as follows: 1926, 23 cases; 1925, 45 cases; estimated expectancy,

22 cases. No deaths from smallpox were reported by these cities for the week this year

Typhoid fever—One thousand and thirty-seven cases of typhoid fever were reported for the week ended October 16, 1926, by 36 States. For the corresponding week of 1925, the same States reported 864 cases of this disease One hundred cities reported 184 cases of typhoid fever for the week this year and 198 cases for the corresponding week last year. The estimated expectancy for these cities was 177 cases

Influenza and pneumonia—Deaths from influenza and pneumonia were reported for the week by 94 cities, with a population of more than 29,560,000, as follows: 1926, 475 deaths; 1925, 534 deaths.

City reports for week ended October 16, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	6	1	0	0	0	1	0	2
New Hampshire									
Concord	22,546	0	0	0	0	0	1	0	0
Manchester	83,097	0	4	0	0	0	0	0	0
Vermont									
Barre	10,008	1	0	0	0	0	2	0	0
Burlington	24,089	2	0	0	0	0	0	0	2
Massachusetts									
Boston	779,620	13	47	15	0	0	5	20	13
Fall River	128,993	0	4	0	2	0	0	1	2
Springfield	142,065	1	4	1	0	0	0	0	2
Worcester	190,757	15	7	7	1	0	0	0	4
Rhode Island									
Pawtucket	69,760	2	1	2	0	0	0	1	0
Providence	267,918	0	5	2	0	2	1	0	6
Connecticut									
Bridgeport	(1)	0	9	4	0	0	1	2	0
Hartford	160,197	--------	7	--------	--------	--------	--------	--------	--------
New Haven	178,927	1	3	2	0	0	0	0	2
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	24	21	7	--------	0	2	0	5
New York	5,873,356	42	141	122	27	5	5	33	116
Rochester	316,786	1	11	0	--------	0	3	0	2
Syracuse	182,003	0	9	1	--------	0	4	0	2
New Jersey									
Camden	128,642	2	7	18	0	0	1	0	3
Newark	452,513	12	13	5	0	0	1	2	8
Trenton	132,020	0	5	3	0	0	0	0	2

[1] No estimate made.

City reports for week ended October 16, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MIDDLE ATLANTIC—con									
Pennsylvania									
Philadelphia	1,979,364	17	64	29		2	0	4	31
Pittsburgh	631,563	40	31	15		2	3	2	7
Reading	112,707	5	4	0		0	0	1	1
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	5	17	14	1	0	1	0	4
Cleveland	936,485	17	47	50	1	1	5	0	15
Columbus	279,836	0	7	9	0	0	1	0	2
Toledo	287,380	22	13	5	0	0	2	0	0
Indiana.									
Fort Wayne	97,846	3	3	7	0	0	1	0	1
Indianapolis	358,819	22	14	19	0	1	2	0	6
South Bend	80,091	8	2	2	0	0	0	0	2
Terre Haute	71,071	7	2	1	0	0	0	0	3
Illinois.									
Chicago	2,995,239	31	126	66	16	0	28	10	29
Peoria	81,564	0	2	0	0	0	25	5	3
Springfield	63,923	2	2	0	0	0	6	0	1
Michigan·									
Detroit	1,245,824	26	59	125	1	1	1	9	13
Flint	130,316	7	12	7	0	0	2	1	3
Grand Rapids	153,698	1	6	2	0	0	1	1	2
Wisconsin:									
Kenosha	50,891	1	1	0	0	0	0	0	1
Madison	46,385	0	1	1	0	0	0	0	2
Milwaukee	509,192	36	23	17	0	0	5	13	9
Racine	67,707	4	2	1	0	0	0	3	0
Superior	39,671	0	1	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	4	4	1	0	0	14	0	1
Minneapolis	425,435	28	31	34	0	0	2	0	3
St Paul	246,001	15	20	12	0	3	1	0	5
Iowa									
Davenport	52,469	1	2	0	0		2	0	
Des Moines	141,441	0	9	1	0		0	0	
Sioux City	76,411	2	3	1	0		2	1	
Waterloo	36,771	12	1	0	0		1	0	
Missouri.									
Kansas City	367,481	9	13	2	2	2	0	0	7
St. Joseph	78,342	1	3	0	0	0	0	0	0
St Louis	821,543	10	47	52	0	0	1	2	
North Dakota·									
Fargo	26,403	3	0	0	0	0	1	3	0
Grand Forks	14,811	0	0	0	0		2	0	
South Dakota									
Aberdeen	15,036	2	0	0	0		0	0	
Sioux Falls	30,127	1	1	0	0	0	0	0	0
Nebraska:									
Lincoln	60,941	2	1	3	0	1	0	0	2
Omaha	211,768	1	13	0	0	0	0	0	6
Kansas.									
Topeka	55,411	4	2	0	0	0	0	0	0
Wichita	88,367	1	4	2	0	0	0	0	3
SOUTH ATLANTIC									
Delaware:									
Wilmington	122,049	0	3	1	0	0	0	0	2
Maryland:									
Baltimore	796,296	15	27	20	5	1	4	2	17
Cumberland	33,741	0	1	1	0	0	0	0	0
Frederick	12,035	0	1	2	0	0	0	0	0
District of Columbia:									
Washington	497,906	2	15	13	0	0	1	0	8

City reports for week ended October 16, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—con									
Virginia									
Lynchburg	30,395	0	2	3	0	0	0	0	0
Norfolk	(1)	11	3	5	0	0	0	0	3
Richmond	186,403	0	22	24	0	1	2	0	5
Roanoke	58,208	0	5	10	0	0	0	0	1
West Virginia									
Charleston	49,019	0	3	0	0	0	0	0	0
Huntington	63,485	0	4	6	0	--------	0	0	--------
Wheeling	56,208	0	3	0	0	0	1	0	1
North Carolina									
Raleigh	30,371	1	4	5	0	0	0	0	1
Wilmington	37,061	0	1	1	0	0	0	0	0
Winston-Salem	69,031	0	4	4	0	0	0	0	2
South Carolina									
Charleston	73,125	0	1	3	25	0	0	0	3
Columbia	41,225	0	3	2	0	0	0	0	0
Greenville	27,311	0	1	4	0	0	0	0	0
Georgia									
Atlanta	(1)	2	10	15	4	0	3	1	2
Brunswick	16,809	0	0	0	0	0	0	9	0
Savannah	93,134	0	4	0	1	1	0	0	2
Florida									
Miami	69,754	0	--------	5	3	0	0	0	1
St Petersburg	26,847	--------	0	--------	--------	0	--------	--------	0
Tampa	94,743	0	1	3	0	1	0	0	0
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	3	8	0	0	0	0	0
Louisville	305,935	4	12	0	1	0	0	0	4
Tennessee									
Memphis	174,533	5	13	7	0	0	0	0	4
Nashville	136,220	0	4	28	0	1	0	0	2
Alabama									
Birmingham	205,670	0	7	0	0	0	0	1	0
Mobile	65,955	0	2	1	0	2	0	0	0
Montgomery	46,481	0	3	8	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	1	2	2	0	--------	2	0	--------
Little Rock	74,216	0	2	0	0	0	0	0	2
Louisiana									
New Orleans	414,493	0	10	1	3	2	0	0	10
Shreveport	57,857	0	0	2	0	0	0	0	1
Oklahoma									
Oklahoma City	(1)	0	3	2	13	0	0	0	0
Texas									
Dallas	194,450	4	9	21	0	0	0	0	3
Galveston	48,375	0	0	2	0	0	0	0	1
Houston	164,954	0	3	21	0	1	1	0	3
San Antonio	198,069	0	1	2	0	0	0	0	4
MOUNTAIN									
Montana									
Billings	17,971	1	0	0	0	0	0	0	0
Great Falls	29,883	11	1	0	0	0	0	0	2
Helena	12,037	0	0	0	0	0	0	0	1
Missoula	12,668	3	0	0	0	0	0	0	1
Idaho									
Boise	23,042	--------	1	0	0	0	0	--------	0
Colorado									
Denver	280,911	1	14	15	--------	3	3	0	5
Pueblo	43,787	4	5	0	0	0	0	0	0
New Mexico									
Albuquerque	21,000	1	1	0	0	0	0	0	1

[1] No estimate made.

City reports for week ended October 16, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MOUNTAIN—continued									
Arizona:									
Phoenix	38,669	0	0	0	0	0	0	0	0
Utah:									
Salt Lake City	130,948	9	4	3	0	0	23	0	4
Nevada:									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	(1)	37	7	14	0	--------	3	16	--------
Spokane	108,897	13	4	4	0	--------	3	0	--------
Tacoma	104,455	5	3	5	0	1	1	0	2
Oregon:									
Portland	282,383	8	9	6	0	0	13	1	7
California:									
Los Angeles	(1)	11	38	25	3	1	3	7	9
Sacramento	72,260	0	2	5	1	0	5	1	5
San Francisco	557,530	19	17	12	2	1	93	7	7

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	1	0	0	0	0	0	1	2	0	3	17
New Hampshire:											
Concord	1	0	0	0	0	0	0	0	0	4	8
Manchester	1	0	0	0	0	1	0	0	0	0	--------
Vermont:											
Barre	0	0	0	0	0	0	0	0	0	4	2
Burlington	1	0	0	0	0	0	0	0	0	1	5
Massachusetts:											
Boston	24	31	0	0	0	12	4	17	2	18	191
Fall River	1	2	0	0	0	2	2	1	0	4	27
Springfield	5	0	0	0	0	1	0	0	0	2	35
Worcester	7	18	0	0	0	3	1	3	0	3	40
Rhode Island:											
Pawtucket	1	0	0	0	0	2	0	0	0	0	9
Providence	4	0	0	0	0	2	1	1	0	2	72
Connecticut:											
Bridgeport	3	5	0	0	0	0	1	0	0	0	16
Hartford	3	--------	0	--------	--------	--------	1	--------	--------	--------	--------
New Haven	4	0	0	0	0	1	3	0	0	4	35
MIDDLE ATLANTIC											
New York:											
Buffalo	13	6	0	0	0	10	3	2	2	12	139
New York	57	53	0	0	0	[2] 88	29	29	4	36	1,267
Rochester	6	3	0	0	0	3	2	2	0	3	61
Syracuse	6	2	0	0	0	2	1	2	0	17	57
New Jersey:											
Camden	2	5	0	0	0	2	1	0	0	1	26
Newark	8	3	0	0	0	11	3	1	0	22	93
Trenton	0	0	0	0	0	1	1	0	0	0	30
Pennsylvania:											
Philadelphia	41	42	0	0	0	38	12	12	1	34	449
Pittsburgh	28	9	0	0	0	16	3	3	0	11	148
Reading	1	1	0	0	0	3	1	1	0	5	23

[1] No estimate made.

[2] Pulmonary tuberculosis only.

City reports for week ended October 16, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
EAST NORTH CENTRAL											
Ohio											
Cincinnati	9	5	0	0	0	5	2	0	0	4	101
Cleveland	18	11	0	0	0	12	4	6	2	20	208
Columbus	7	8	1	0	0	5	2	2	0	2	71
Toledo	8	6	0	0	0	6	2	0	0	32	59
Indiana											
Fort Wayne	1	1	1	0	0	2	1	2	0	0	23
Indianapolis	6	8	1	3	0	13	2	2	3	17	102
South Bend	2	1	0	0	0	0	0	0	0	2	13
Terre Haute	1	3	0	0	0	1	0	0	0	0	23
Illinois											
Chicago	72	52	0	0	0	62	7	8	2	53	614
Peoria	9	3	0	0	0	1	0	0	0	1	20
Springfield	1	1	0	0	0	0	1	0	0	5	20
Michigan											
Detroit	48	51	2	1	0	17	5	2	2	37	266
Flint	7	22	0	0	0	0	0	0	0	0	28
Grand Rapids	6	8	0	0	0	0	0	0	0	1	35
Wisconsin											
Kenosha	1	1	1	0	0	0	1	1	0	5	7
Madison	1	2	0	0	0	0	0	0	0	6	3
Milwaukee	18	18	2	0	0	3	1	0	0	46	71
Racine	3	1	0	0	0	1	0	0	0	2	7
Superior	2	2	0	0	0	0	0	0	0	0	7
WEST NORTH CENTRAL											
Minnesota											
Duluth	6	9	0	0	0	0	1	0	0	1	21
Minneapolis	28	58	1	0	0	4	1	1	0	4	76
St Paul	12	34	3	1	0	4	0	1	0	18	55
Iowa.											
Davenport	1	2	0	0			0	0		0	
Des Moines	8	4	0	0			0	0		0	
Sioux City	2	3	0	1			0	0		1	
Waterloo	2	1	0	0			1	0		7	
Missouri.											
Kansas City	8	3	0	0	0	8	3	0	0	5	92
St Joseph	3	4	0	0	0	0	0	0	0	3	32
St Louis	26	19	1	1	0	10	4	4	2	13	193
North Dakota											
Fargo	1	11	0	0	0	0	0	0	0	0	8
Grand Forks	1	8	0	0			0	0		0	
South Dakota											
Aberdeen	1	6	0	0			0	0		5	
Sioux Falls	1	0	0	0	0	0	0	0	0	0	
Nebraska											
Lincoln	0	1	0	0	0	0	0	1	0	1	15
Omaha	3	6	1	0	0	3	1	1	1	0	47
Kansas.											
Topeka	2	3	0	0	0	0	1	0	1	1	14
Wichita	2	7	0	0	0	2	1	0	0	4	35
SOUTH ATLANTIC											
Delaware											
Wilmington	2	0	0	0	0	0	1	0	0	0	25
Maryland											
Baltimore	10	12	0	0	0	15	9	11	0	32	208
Cumberland	1	0	0	0	0	0	0	0	0	0	13
Frederick	0	0	0	0	0	0	0	0	0	0	2
District of Col											
Washington	11	8	0	0	0	10	3	2	0	13	128
Virginia											
Lynchburg	1	4	0	0	0	1	1	3	0	1	9
Norfolk	1	2	0	0	0	1	0	0	0	2	
Richmond	7	8	0	0	0	4	2	0	0	1	51
Roanoke	2	5	0	1	0	1	1	5	0	0	19
West Virginia											
Charleston	1	5	0	0	0	4	2	0	0	1	23
Huntington	1	4	0	0			0	0		0	
Wheeling	4	2	0	0	0	0	2	0	0	1	22
North Carolina											
Raleigh	2	6	0	0	0	1	0	0	0	13	15
Wilmington	1	0	0	0	0	0	0	1	1	5	12
Winston-Salem	2	0	0	0	0	1	1	2	1	7	19

City reports for week ended October 16, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
SOUTH ATLANTIC—continued											
South Carolina:											
Charleston	0	1	0	0	0	0	2	2	0	0	26
Columbia	0	0	0	0	0	0	1	0	0	0	--------
Greenville	0	1	0	0	0	1	0	0	0	0	8
Georgia:											
Atlanta	6	12	1	0	0	2	2	5	1	2	72
Brunswick	1	0	0	0	0	0	0	2	0	0	5
Savannah	1	0	0	0	0	0	0	0	0	0	30
Florida:											
Miami	--------	0	--------	0	0	4	--------	2	0	3	32
St. Petersburg	0	--------	0	--------	0	0	0	--------	0	--------	9
Tampa	0	1	0	1	0	0	1	2	0	0	23
EAST SOUTH CENTRAL											
Kentucky:											
Covington	1	2	0	0	0	0	0	0	0	0	18
Louisville	4	6	0	0	0	5	4	2	2	3	81
Tennessee:											
Memphis	3	12	0	0	0	4	3	9	1	21	81
Nashville	4	3	0	0	0	3	3	12	2	6	50
Alabama:											
Birmingham	5	4	0	0	0	4	4	0	1	1	60
Mobile	1	1	0	0	0	1	0	3	0	0	18
Montgomery	1	0	0	0	0	0	0	1	0	0	9
WEST SOUTH CENTRAL											
Arkansas:											
Forth Smith	1	0	0	0	--------	--------	0	0	--------	2	--------
Little Rock	2	3	0	0	0	2	1	0	0	0	--------
Louisiana:											
New Orleans	3	3	0	0	0	12	4	2	0	0	134
Shreveport	1	3	0	0	0	5	1	0	0	0	30
Oklahoma:											
Oklahoma City	1	2	0	0	0	2	1	4	0	0	23
Texas:											
Dallas	4	9	0	1	0	3	2	2	0	0	44
Galveston	0	0	0	0	0	1	0	0	0	0	16
Houston	0	1	0	0	0	4	0	0	0	0	54
San Antonio	1	1	0	0	0	5	1	2	0	0	35
MOUNTAIN											
Montana:											
Billings	1	0	0	0	0	0	1	0	0	1	5
Great Falls	1	3	0	0	0	0	0	0	0	0	10
Helena	1	0	0	0	0	0	0	0	0	0	6
Missoula	0	5	0	0	0	0	0	2	1	0	10
Idaho:											
Boise	0	0	1	0	0	0	1	0	0	--------	3
Colorado:											
Denver	5	18	1	0	0	8	3	1	0	2	80
Pueblo	1	2	0	0	0	4	1	0	0	0	12
New Mexico:											
Albuquerque	1	1	0	0	0	5	2	4	0	0	11
Arizona:											
Phoenix	1	0	0	0	0	7	0	0	0	0	17
Utah:											
Salt Lake City	2	1	0	1	0	0	3	2	0	5	29
Nevada:											
Reno	1	0	0	0	0	0	0	0	0	0	2
PACIFIC											
Washington:											
Seattle	7	20	1	1	--------	--------	2	2	--------	0	--------
Spokane	5	11	1	0	--------	--------	1	1	--------	1	--------
Tacoma	3	2	1	11	0	0	1	1	0	0	19
Oregon:											
Portland	6	30	2	6	0	0	2	1	1	2	70
California:											
Los Angeles	11	27	3	0	0	18	4	1	0	5	205
Sacramento	1	2	0	0	0	1	1	1	1	0	--------
San Francisco	6	14	0	0	0	12	1	0	0	9	155

City reports for week ended October 1 , 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts									
Boston	0	0	0	0	0	0	2	2	0
Rhode Island									
Providence	0	0	0	1	0	0	0	0	0
MIDDLE ATLANTIC									
New York									
New York	3	2	0	3	0	0	12	0	1
New Jersey									
Newark	1	0	1	0	0	0	1	1	0
Pennsylvania									
Philadelphia	0	0	1	1	0	0	1	0	0
Pittsburgh	0	0	0	1	0	0	0	1	0
EAST NORTH CENTRAL									
Ohio									
Toledo	0	0	0	0	0	0	0	1	0
Illinois									
Chicago	1	0	1	1	0	0	4	4	0
Michigan									
Detroit	2	2	0	0	0	0	1	7	4
WEST NORTH CENTRAL									
Missouri									
Kansas City	0	0	0	0	0	0	0	1	0
St Joseph [1]	0	0	0	0	0	1	0	0	0
St Louis	1	0	0	0	0	0	1	1	0
SOUTH ATLANTIC									
Maryland									
Baltimore	0	0	0	0	0	0	1	1	0
District of Columbia									
Washington	0	0	1	1	0	0	1	0	0
Virginia:									
Richmond	0	0	0	1	0	0	0	0	1
Roanoke	0	0	0	0	0	1	0	0	0
North Carolina									
Wilmington	1	0	0	0	0	0	0	1	0
South Carolina:									
Charleston	0	0	0	0	2	0	0	0	0
Georgia:									
Atlanta	0	0	0	0	0	1	0	0	0
Florida									
Tampa	0	0	0	0	0	1	0	0	0
EAST SOUTH CENTRAL									
Kentucky.									
Louisville	0	0	0	0	0	0	0	1	0
Tennessee									
Memphis	0	1	0	0	0	1	0	0	0
Nashville	1	1	0	0	0	0	0	0	0
Alabama [2]									
Birmingham	0	0	0	0	0	0	0	1	1
WEST SOUTH CENTRAL									
Louisiana									
New Orleans	0	0	1	0	2	2	0	0	0
Texas									
Dallas	0	0	0	0	1	1	0	0	0
MOUNTAIN									
Montana									
Missoula	3	3	0	0	0	0	0	0	0
PACIFIC									
Washington.									
Seattle	1	0	0	0	0	0	0	0	0
Oregon									
Portland	1	0	0	0	0	0	0	1	0
California [2]									
San Francisco	0	0	0	1	0	0	0	0	1

[1] Rabies (human): 1 case and 1 death at St Joseph, Mo

[2] Typhus fever 1 case at Montgomery, Ala , and 1 case at Los Angeles, Calif

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended October 16, 1926, compared with those for a like period ended October 17, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926 The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below

Summary of weekly reports from cities, September 12 to October 16, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926
101 cities	[2] 95	84	[2] 97	107	[3] 115	[3] 128	134	[4] 159	150	[5] 165
New England	139	35	81	73	74	66	96	66	120	[5] 81
Middle Atlantic	83	63	81	70	84	81	114	118	129	100
East North Central	76	95	101	128	[3] 130	[3] 135	153	188	166	219
West North Central	145	95	153	127	192	143	198	177	233	209
South Atlantic	88	111	109	128	207	163	179	[6] 224	209	218
East South Central	74	109	58	135	63	270	89	[7] 242	80	270
West South Central	57	77	75	69	62	211	79	[8] 188	88	219
Mountain	[2] 217	237	[2] 189	137	129	291	194	173	157	164
Pacific	130	100	102	213	102	175	102	200	105	175

MEASLES CASE RATES

101 cities	[2] 29	28	[2] 35	37	[3] 39	[3] 36	53	[4] 31	67	[5] 14
New England	108	19	177	38	242	21	371	33	431	[5] 28
Middle Atlantic	34	10	33	9	35	10	47	11	65	9
East North Central	22	23	22	22	[3] 24	[3] 24	24	29	24	36
West North Central	8	12	6	28	6	10	6	26	10	44
South Atlantic	15	9	29	11	23	13	15	[6] 16	52	21
East South Central	5	16	11	10	11	5	11	[7] 6	5	0
West South Central	4	4	0	0	0	0	0	[8] 0	0	13
Mountain	[2] 9	73	[2] 28	118	9	109	37	109	18	237
Pacific	14	213	19	310	3	329	11	181	28	291

SCARLET FEVER CASE RATES

101 cities	[2] 60	66	[2] 63	79	[3] 86	[3] 100	92	[4] 112	121	[5] 130
New England	60	76	46	71	86	104	105	144	127	[5] 143
Middle Atlantic	46	44	48	56	62	51	65	57	75	62
East North Central	58	64	65	80	[3] 96	[3] 99	109	121	143	132
West North Central	133	129	135	153	176	197	119	215	256	318
South Atlantic	36	49	61	70	67	111	92	[6] 103	129	126
East South Central	53	119	74	83	74	99	121	[7] 149	142	145
West South Central	40	30	13	52	48	69	62	[8] 64	53	86
Mountain	[2] 161	82	[2] 85	118	176	319	148	300	46	264
Pacific	64	119	77	119	88	175	102	159	135	205

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively

[2] Helena, Mont., not included.

[3] Superior, Wis , not included

[4] Greenville, S C , Tampa, Fla., Covington, Ky , and Little Rock, Ark , not included.

[5] Hartford, Conn., not included.

[6] Greenville, S. C , and Tampa, Fla., not included.

[7] Covington, Ky., not included.

[8] Little Rock, Ark., not included.

Summary of weekly reports from cities, September 12 to October 16, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

SMALLPOX CASE RATES

	Week ended—									
	Sept 19, 1925	Sept 18, 1926	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926
101 cities	[2] 6	2	[2] 5	3	[3] 2	[3] 1	5	[4] 3	8	[5] 4
New England	0	0	0	0	0	0	0	0	0	[5] 0
Middle Atlantic	0	0	0	1	0	0	0	0	0	0
East North Central	2	0	2	1	[3] 0	[3] 0	1	1	8	3
West North Central	2	0	2	2	2	2	10	2	6	6
South Atlantic	12	9	6	6	0	4	6	[6] 0	6	4
East South Central	37	0	32	0	0	0	16	[7] 11	42	0
West South Central	4	4	0	13	0	0	0	[8] 5	0	4
Mountain	[2] 0	0	38	0	9	9	9	9	28	9
Pacific	47	19	39	19	25	5	44	19	55	32

TYPHOID FEVER CASE RATES

101 cities	[2] 49	53	[2] 44	44	[3] 39	[3] 42	36	[4] 33	35	[5] 32
New England	29	33	22	9	46	17	26	17	24	[5] 61
Middle Atlantic	35	55	34	45	32	28	31	27	28	26
East North Central	18	29	29	26	[3] 20	[3] 34	21	23	31	15
West North Central	57	26	16	26	35	40	33	22	20	14
South Atlantic	104	81	88	92	50	115	52	[6] 75	65	66
East South Central	194	249	200	166	131	130	163	[7] 154	121	140
West South Central	159	69	97	77	92	47	57	[8] 23	44	26
Mountain	[2] 85	82	[2] 94	36	111	82	120	64	46	46
Pacific	28	35	22	22	28	19	8	22	19	16

INFLUENZA DEATH RATES

95 cities	[2] 5	4	[2] 3	6	[3] 5	[3] 6	3	[9] 4	6	[5] 6
New England	0	0	0	5	0	2	0	0	0	[5] 5
Middle Atlantic	6	3	3	3	3	2	3	3	5	4
East North Central	4	3	4	3	[3] 6	[3] 5	3	2	8	2
West North Central	6	4	4	8	6	0	4	6	6	11
South Atlantic	2	6	2	9	4	9	2	[6] 6	2	8
East South Central	5	5	0	10	16	10	0	[7] 6	16	16
West South Central	10	24	0	24	19	38	15	14	10	14
Mountain	[2] 19	0	[2] 9	9	0	18	9	18	0	27
Pacific	0	7	4	7	0	7	0	0	11	11

PNEUMONIA DEATH RATES

95 cities	[2] 60	53	[2] 54	65	[3] 61	[3] 69	63	[9] 64	90	[5] 78
New England	67	54	53	76	31	87	58	33	93	[5] 79
Middle Atlantic	61	51	66	70	68	71	63	76	94	88
East North Central	44	40	39	45	[3] 44	[3] 58	61	54	89	63
West North Central	45	51	26	55	36	70	45	63	58	53
South Atlantic	81	54	86	79	81	66	71	[6] 61	121	88
East South Central	79	52	42	88	100	109	110	[7] 77	95	52
West South Central	77	123	48	99	63	71	63	94	53	104
Mountain	[2] 113	118	[2] 76	55	139	155	92	55	120	118
Pacific	62	53	51	78	87	28	51	53	80	82

[2] Helena, Mont, not included
[3] Superior, Wis, not included
[4] Greenville, S. C, Tampa, Fla, Covington, Ky, and Little Rock, Ark, not included.
[5] Hartford, Conn., not included
[6] Greenville, S C, and Tampa, Fla, not included
[7] Covington, Ky, not included
[8] Little Rock, Ark, not included
[9] Greenville, S. C., Tampa, Fla, and Covington, Ky., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,148
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

CHOLERA ON VESSEL

Further relative to steamship "Macedonia"—Suez, Egypt, from Yokohama, Japan, via ports—September 26, 1926.[1]—Information received under date of September 26, 1926, from Suez, Egypt, shows the arrival at that port of the steamship *Macedonia* from Yokohama, Japan, via Kobe, Hongkong, Shanghai, and Colombo, with history of having landed seven cases of cholera at Yokohama, August 5, 1926. Previous report had stated the arrival at Yokohama of the vessel with one case of cholera The medical officer on the vessel stated that the entire crew had received vaccination against cholera.

THE FAR EAST

Reports for week ended October 9, 1926.—The following report for the week ended October 9, 1926, was transmitted by the Far Eastern Bureau of the Secretariat of the Health Section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt Alexandria	0	0	0	0	1	0
Mauritius Port Louis	----	1	0	0	0	0
Arabia Aden	0	0	0	0	1	0
British India.						
Calcutta	----	0	----	14	4	2
Bombay	----	1	----	0	3	2
Madras	----	0	----	0	11	1
Rangoon	----	2	----	0	0	0

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Dutch East Indies						
Belawan Deli	0	0	0	0	1	0
Siam: Bangkok	0	0	2	0	3	2
China						
Amoy	0	0	18	---	0	0
Shanghai	0	0	6	11	0	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia.—Jeddah, Kamaran, Perim.
Iraq.—Basra.
Persia.—Mohammerah, Bender-Abbas, Bushire
British India.—Karachi, Chittagong, Cochin, Vizagapatam, Tuticorin, Negapatam.

[1] Public Health Reports, Sept. 10, 1926, p 1984

Ceylon.—Colombo
Federated Malay States.—Port Swettenham.
Straits Settlements.—Singapore, Penang
Dutch East Indies.—Batavia, Cheribon, Surabaya, Samarang, Palembang, Sabang, Makassar, Banjermasin, Tarakan, Padang, Balik-Papan, Samarinda, Menado
Sarawak.—Kuching.
British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.
Portuguese Timor.—Dilly
French Indo-China.—Saigon and Cholon, Turane, Haiphong.
China.—Hong-Kong
Formosa.—Keelung
Japan.—Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Simonoseki
Korea.—Chemulpo, Fusan
Manchuria.—Mukden, Changchun, Harbin, Antung.
Kwantung.—Port Arthur, Dairen
U S.S R.—Vladivostok

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island
New Guinea.—Port Moresby
New Britain Mandated Territory.—Rabaul
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia.—Noumea
Fiji.—Suva.
Hawaii.—Honolulu.
Society Islands.—Papeete

AFRICA

Egypt.—Port Said, Suez
Anglo-Egyptian Sudan.—Port Said, Suakin.
Eritrea.—Massaua
French Somaliland.—Jibuti.
British Somaliland.—Berbera.
Italian Somaliland.—Mogadiscio.
Kenya.—Mombasa
Zanzibar.—Zanzibar.
Tanganyika.—Dar-es-Salaam.
Seychelles.—Victoria.
Portuguese East Africa.—Mozambique, Beira, Lorenco-Marques.
Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

Dutch East Indies.—Pontianak.
Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga
Madagascar.—Tamatave, Majunga.

ALGERIA

Plague—Algiers—September 23, 1926.—Information received under date of October 14, 1926, shows the occurrence of a case of plague at Algiers, Algeria, September 23, 1926.

CANADA

Communicable diseases—Week ended October 16, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the week ended October 16, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal fever				2				2
Influenza	12							12
Lethargic encephalitis				2				2
Poliomyelitis				8				8
Smallpox				3		1	6	10
Typhoid fever		5	10	20	7	2	4	48

CUBA

Malaria prevalence—Santiago—July-August, 1926.—On July 12, 1926, 75 cases of malaria were reported present at Santiago de Cuba. Malaria prevalence was continuously reported to October 16, 1926, with 20 cases present on that date. Population, 70,000.

Typhoid and other fevers—Water supply.—Typhoid fever and intestinal fevers were stated to be prevalent and the water supply and sanitary system inadequate.

EGYPT

Typhoid fever prevalence—Alexandria.—Typhoid fever prevalence was reported at Alexandria, Egypt, September 23, 1926. Previous reports show the occurrence of 55 cases of typhoid fever at Alexandria from July 1 to 29 and 128 cases with 10 deaths from July 30 to August 26, 1926.

HAITI

Disease prevalence—Port au Prince.—Disease prevalence has been reported at Port au Prince, Haiti, for the months of July, August, and September, 1926, as follows. Gastroenteritis continuously present and constituting the most important health problem of the community; tuberculosis and typhoid fever present with an unreported number of cases; malaria stated to be present in many sections of the Island. Population, 120,000.

MADAGASCAR

Plague—July, 1926—August 1–15, 1926.—Plague has been reported in the Island of Madagascar as follows: July 1–31, 1926—cases, 17; deaths, 16. The urban occurrence was: *Tamatave* (port) cases, 3; deaths, 3 (bubonic); *Tananarive* (interior)—cases, 4; deaths, 4 (pneumonic).

August 1–15, 1926 —Cases, 30; deaths, 25. The urban occurrence was as follows: *Majunga* (port)—cases, 14; deaths, 10; *Tamatave* (port)—cases, 3; deaths, 2 (bubonic). *Tananarive*—(interior) cases, 3; deaths, 3 (pneumonic, 2; septicemic, 1)

Further relative to plague at Majunga, Tamatave, and Tananarive.—On August 14, 1926, bubonic plague was declared epidemic at Majunga. This locality was stated to be the most important port on the west coast of Madagascar. At Tananarive from August 15 to 24, 1926, two deaths from plague in Europeans, members of the same family, were reported The last previous occurrence of plague in Europeans was stated to have been in the year 1924.

SALVADOR

Mortality—San Salvador—July, 1926 —During the month of July, 1926, 60 deaths from communicable diseases were reported at San Salvador, Republic of Salvador. Gastroenteritis caused 43 deaths, measles 6, tuberculosis 9, typhoid fever 2. (Population, 85,000)

Mortality—Malaria—Republic of Salvador.—During the period under report, 3,485 deaths were reported in the Republic of Salvador. The prevailing diseases were stated to be malaria and other tropical fevers. (Population, 1,600,000.)

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended November 5, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China.				
Shanghai	Sept 12-18	2	19	Cases, foreign: Deaths, native and foreign
India				Aug. 22-28, 1926. Cases, 2,378; deaths, 1,528.
Calcutta	Sept. 5-18	27	27	
Madras	Sept. 19-25	3	3	
Siam				Sept 5-11, 1926: Cases, 33, deaths 23. Apr 1-Sept. 11, 1926. Cases, 7,587; deaths, 4,[illegible].
Bangkok	Sept 5-11	7	4	District.
On vessel:				
S S Macedonia	Aug. 5	7		At Yokohama, Japan, from Singapore, July 18 Corrected from report of Sept 10, 1926 Vessel last reported at Suez

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	Sept. 23	1		
Oran	Sept 21-30	6	1	
Greece.				
Patras	Sept 26-Oct 2	1		

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended November 5, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
India				Aug 22-28, 1926 Cases, 481; deaths, 266
Bombay	Sept 12-18	4	3	
Madras Presidency	Aug 29-Sept 4	75	51	
Rangoon	Sept 5-18	18	19	
Iraq				
Baghdad	Sept 5-11	2	2	
Madagascar				
Tananarive Province				July, 1926 Cases, 17, deaths, 16 Bubonic and pneumonia Aug 1-15, 1926 Cases, 30, deaths, 25 Bubonic, pneumonic, septicemic
Towns—				
Majunga	Aug 1-15	14	10	Bubonic (port)
Tamatave	July 1-31	3	3	Do
Do	Aug 1-15	3	2	Do
Tananarive	July 1-31	4	4	Pneumonic (Interior)
Do	Aug 1-15	3	3	Pneumonic, 2, septicemic, 1
Siam				Apr 1-Sept 11, 1926 Cases, 15, deaths, 10

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Brazil				
Para	Sept 5-25	11	8	
Pernambuco	Aug 29-Sept 11	45	8	
Rio de Janeiro	Sept 19-25	301	198	From Jan 1-Sept 25, 1926: Cases, 3,272, deaths, 1,690
British South Africa				
Northern Rhodesia	Sept 11-17	1		
Canada				
Alberta	Oct 9-16	6		
Calgary	do	5		
Ontario	do	3		
Saskatchewan	do	1		
Ceylon				
Colombo	Sept 12-18	2		
Great Britain				
London	Sept 26-Oct 2	2		
Newcastle-on-Tyne	Oct 3-9	1		
South Shields	do			Several cases
India				Aug 22-28, 1926: Cases, 1,471; deaths, 407.
Bombay	Sept 5-18	8	4	
Calcutta	do	4	8	
Madras	Sept 19-25	4		
Rangoon	Sept. 5-11	1		
Iraq				
Baghdad	do	1		
Mexico				
San Luis Potosi	Oct 3-16		3	
Portugal				
Lisbon	Sept. 19-25	1		
Siam				Sept 5-11, 1926. Cases, 7, deaths, 4 Apr. 1-Sept 11, 1926 Cases 564, deaths, 222
Bangkok	Sept 5-11	4	3	District
Spain				
Valencia	Sept 19-25	1		

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
China				
Antung	Sept 12-19	2		
Mexico				
Mexico City	Sept 26-Oct 9	15		Including municipalities in Federal district
Palestine:				
Jaffa District	Sept 28-Oct 4	1		
Jerusalem	Sept 21-27	1		
Union of South Africa				
Natal—				
Durban	Aug 8-14	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 29, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr. 18-May 29, 1926 Cases, 31; deaths, 29.
China:				
Amoy	Aug 8-Sept. 18	170		Stated to be present in epidemic form
Canton	June 1-30	38	14	
Do	July 15-31	54	28	
Foochow	Aug 15-Sept 18			Present
Kulangsu	Sept 12-18		2	
Manchuria—				
Dairen	Aug 23-29	1	1	
Nanking	July 25-Aug 7			Do.
Shanghai	Reported July 20	35	8	
Do	July 25-Sept 11	34	306	Cases, foreign, deaths, native and foreign
Swatow	July 11-Sept 18	36	63	
Tsingtao	July 11-Aug 30	4	4	Japanese settlements, 10 deaths; Chinese, 30 to 40 deaths daily; estimated
Chosen				
North Heian Province	Sept 3-16	70	30	Deaths estimated
Shingishu	Sept 13	19		Including places in vicinity
French Settlements in India				Mar 7-June 26, 1926 Cases, 31, deaths, 30
India				Apr 25-June 26, 1926 Cases, 18,526, deaths, 11,531 June 27-Aug 21, 1926 Cases, 16,248, deaths, 10,349
Bombay	May 30-June 5	1	1	
Do	July 18-Aug 28	3	3	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-Sept 4	268	238	
Madras	May 16-June 5	2	1	
Do	Aug 1-Sept 18	4	3	
Rangoon	May 9-June 26	67	44	
Do	June 27-Sept. 4	31	29	
Indo China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug 14	31	17	
Japan				To Sept 10, 1926 Cases, 35.
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama.
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Taihoku	Sept 1-10	2		
Wakayama	To Sept 10	3		
Philippine Islands.				
Manila	May 18-24	2	2	
Do	June 27-Sept. 11	13	3	
Provinces—				
Albay	Apr. 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb 21-Mar 6	3	3	
Pampanga	July 25-31	1	1	
Rizal	July 18-24	1		
Romblon	Dec 14-31	42	43	
Do	Jan. 2-Mar. 27	41	35	
Siam				Apr. 1-Sept. 4, 1926: Cases, 7,554, deaths, 4,953.
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-Sept. 4	82	28	
Straits Settlements				
Singapore	July 4-17	2	1	
On vessel				
Steamship Macedonia	Aug. 5	1		At Yokohama, Japan Vessel sailed from Singapore, July 18, 1926

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 29, 1926—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported
Do	July 1-20	1		
Bona	Aug 14	1		
Philippeville	Sept 7	1		
Azores				
Fayal Island—				
Horta	Aug 2-29	2	2	
St Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	
Brazil				
Paranagua	Oct 8			Present
British East Africa				
Kisumu	May 16-22	1	1	
Do	Aug 17-Sept 11	3	2	
Uganda	Mar 1-June 30	732	574	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	
China				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug 7	28		
Foochow	June 6-July 31			Several cases Not epidemic
Nanking	May 9-Sept 18			Prevalent
Swatow	July 25-31	14		
Ecuador				January-June, 1926 Cases, 385; deaths, 154
Chimborazo	January-June	9	2	Rats taken, 766
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1-Sept 30	16	3	Rats taken, 62,544, found infected, 89
Leon	January-June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1,542
Egypt				Jan 1-Sept 9, 1926, Cases, 128.
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug. 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkiah	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
Sidi Barani	Sept 30	12		In western desert.
France				
Marseille	July 8	1	1	Reported July 24.
St Denis	Reported Aug 2	1		Vicinity of Paris.
St Ouen	Aug 14	2		Suburb of Paris
Great Britain				
Liverpool	Aug 29-Sept 4	2	1	
Greece				
Athens	Apr. 1-May 31	16	4	Including Piræus
Do	Aug 1-31	9	2	Do
Patras	May 27-June 12	4	1	
Do	July 25-Sept. 4	7	4	
Zante	May 17	1		
Hawaii				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Paauhau	July 18-24			Plague-infected rat trapped.
India				Apr 25-June 16, 1926 Cases, 53,001, deaths, 41,576 June 27-Aug 21, 1926 Cases, 2,245; deaths, 1,366
Bombay	May 2-June 26	16	15	
Do	July 18-Aug 21	5	5	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 29, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
India—Continued				
Madras Presidency	Apr 25–June 26	162	93	
Do	July 1–Aug 28	434	208	
Rangoon	May 9–June 26	20	15	
Do	June 27–Sept 4	56	44	
Indo-China				
Saigon	May 23–June 26	8	3	
Do	July 18–Aug 7	2	1	
Iraq				
Baghdad	Apr 18–June 12	161	108	
Do	July 18–31	2	2	
Japan				
Yokohama	July 2–30	9	5	
Do	Aug 7	2		Total, July 2–Aug 10, 1925, Cases, 9, deaths, 8
Java				
Batavia	Apr 24–June 19	65	65	
Do	June 26–Sept 11	64	62	
Cheribon	Apr 11–24	3	3	
East Java and Madoera	June 13–19	1	1	
Do	July 25–31	1	1	
Surabaya	Aug 22–28	17	2	
Madagascar				
Ambositra Province	May 1–15	4	4	Septicemic.
Antisirabi Province	June 16–30	4	4	
Itasy Province	do	17	10	
Majunga Province	do	10	6	
Mananjary Province	do	1	1	
Moramanga Province	Apr 1–15	2	2	Do
Tananarive Province				Apr 1–June 30, 1926 Cases, 130, deaths, 120
Tamatave (Port)	May 16–31	1	1	
Tananarive Town	Apr 1–June 30	7	7	
Mauritius				
Port Louis	July 31	1	1	
Nigeria				Feb 1–Apr 30, 1926 Cases, 115 deaths, 92
Peru				May–June, 1926 Cases, 57, deaths, 16 July 1–Aug 31, 1926, Cases, 44, deaths, 16
Departments—				
Ancash	May 1–31			Present
Do	July 1–31	2		
Cajamarca	May 1–June 30	10	4	
Do	Aug 1–31	1		
Ica	May 1–31	1		
Do	July 1–31	1		
Libertad	May 1–31	4		
Lima	May 1–June 30	29	12	
Do	July 1–Aug 30	40	16	
Piura	June 1–30	13		
Russia				Jan 1–Mar. 31, 1926: Cases, 37
Senegal				Nov 1–30, 1925 Cases, 3, deaths, 2. Mar 1–Apr 30, 1926 Cases, 15, deaths, 4.
Siam				Apr. 1–Sept. 4, 1926 Cases, 30, deaths, 20.
Bangkok	May 23–June 26	2	2	
Do	July 18–24	1	1	
Straits Settlements:				
Singapore	May 2–8	1	1	
Do	July 4–17	1	1	
Syria:				
Beirut	July 1–Aug 10	2		
Do	Oct 15			Present.
Tunisia	May 11–June 30	174		
Do	July 1–20	12		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan.
Turkey:				
Constantinople	Aug 1–Sept 25	7	4	
Union of South Africa				
Cape Province	May 16–22	5	3	
Calvinia District	June 13–26	12	6	
Do	June 27–Aug. 21	4	3	
Williston District	June 13–26	2		
Do	June 27–July 3	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 29, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa—Con				
Orange Free State—				
Hoopstad District	Aug 15-21	1		
Protestpan	May 9-22	3	3	
On vessel				
Steamship Zaria	September, 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa, 29 plague-infected rats found on board

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 20	14		
Do	July 1-Aug 31	3		
Belgium				
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-Aug 31	16	8	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Sept 11	63	36	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-Aug 14	18	11	
Pernambuco	July 11-Aug 28	70	10	
Porto Alegre	Aug 10-31	2		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 18	2, 230	1, 135	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa.				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Canada				May 30-June 12, 1926 Cases, 46.
Alberta				May 30-June 12, 1926 Cases, 3. June 27-Oct 9, 1926 Cases, 47
Calgary	Sept 5-Oct 9	16		
British Columbia—				
Vancouver	Aug 16-Sept 12	3		
Manitoba				May 30-June 26, 1926 Cases, 15 June 27-Sept 25, 1926 Cases, 19
Winnipeg	June 6-12	5		
Do	July 4-Sept 4	12		
Ontario				May 30-June 26, 1926 Cases, 36. June 27-Oct 9. Cases, 82.
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2		
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Peterboro	Sept 1-30	10		
Toronto	July 18-Oct. 9	11		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16. June 27-Oct 9 Cases, 86
Regina	July 4-Sept 25	3		
Ceylon				Mar 14-May 29, 1926 Cases, 44; deaths, 3
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Changsha	Aug 8-14	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 29, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Chungking	May 2-Sept 4			Present
Foochow	do			Do
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-July 3	1		Do
Dairen	Apr 25-June 20	69	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do
Harbin	May 14-June 30	21		Do
Do	July 1-28	12		
Kai-yuan	May 16-June 30	10		Do
Kungchuling	June 13-19	1		Do
Liaoyang	May 16-June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do
Ssupingkai	May 16-June 30	2		Do
Teshihchiao	do	2		Do
Wa-feng-tien	do	3		Do
Nanking	May 8-Sept 18			Present
Shanghai	May 2-June 26	10	25	Cases, foreign deaths, population of international concession, foreign and native
Do	June 27-July 24	3	3	
Swatow	May 9-Sept 18			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-May 31, 1926 Cases, 548; deaths, 121
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Aug 19	11	5	
Cairo	Jan 29-Apr 1	16	4	
Esthonia				May 1-June 30, 1926 Cases, 3
France				Mar 1-June 30, 1926 Cases, 141.
Paris	Sept 1-20	21	5	
St Etienne	Apr 18-June 15	7	3	
French Settlements in India	Mar 7-June 26	282	282	
Gold Coast	Mar 1-May 31	602	13	
Great Britain				
England and Wales				May 23-June 26, 1926 Cases, 933 June 27-Sept 25, 1926: Cases, 1,289
Birmingham	Sept 26-Oct 2	1		
Bradford	May 23-29	1		
Do	Aug 29-Sept 4	1		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-Sept 25	3		At Gateshead, several cases reported
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Oct 2	9		
Greece				
Athens	July 1-31	71	6	Including Piræus.
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr 25-June 26, 1926. Cases, 54,851, deaths, 14,771. June 27-Aug. 21, 1926 Cases, 18,910, deaths, 6,129
Bombay	May 2-June 26	220	134	
Do	June 27-Sept 4	104	57	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-26	24	18	
Do	June 27-Aug 28	34	29	
Karachi	May 16-June 26	44	18	
Do	June 27-Aug. 21	13	7	
Madras	May 16-June 26	7	4	
Do	June 27-Sept 18	54	15	
Rangoon	May 9-June 26	10	5	
Do	July 4-Sept 4	20	4	
Indo-China:				
Saigon	May 9-June 26	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 29, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Iraq				
Baghdad	May 9-June 26	8	3	
Do	July 4-Aug 28	2	1	
Basra	Apr 18-June 22	34	25	
Do	Aug 15-21	1		
Italy				Mar 28-June 26, 1926 Cases, 34 June 27-July 10, 1926 Cases, 3
Catania	Aug 9-15	2		
Rome	June 14-20	4		Entire consular district, including island of Sardinia
Jamaica				Apr 25-June 26, 1926 Cases, 201 (Reported as alastrim)
Do				June 27-Sept 25, 1926 Cases, 238 (Reported as alastrim)
Japan				Apr 11-June 19, 1926 Cases, 641
Kobe	May 30-June 5	1		
Nagoya	May 16-22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-June 25	2		Province
Do	July 21-Aug 28	5		Do
East Java and Madura	Apr 11-July 3	100	6	
Do	July 4-Aug 7	43	1	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	11	1	
Do	July 18-Aug 28	63	3	
Latvia				Apr 1-June 30, 1926 Cases, 5
Mexico				Feb 1-Apr 30, 1926 Deaths, 982
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-Sept 27		8	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
Do	July 25-Sept 25	6		Do
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present 100 miles from Chihuahua.
San Luis Potosi	June 13-26		7	
Do	July 4-Oct 2		15	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Do	July 1-Sept 30		13	
Netherlands				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-Apr 30, 1926 Cases, 404; deaths, 33.
Persia				
Teheran	Apr 21-June 22		7	
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May 1, 1926 Cases, 12; deaths, 1 June 27-July 24, 1926 Cases, 2, deaths, 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Sept. 11	21	6	
Oporto	May 23-June 5	4		
Do	July 11-24	2		
Russia				Jan 1-Mar 31, 1926 Cases, 2,103.
Siam				Apr 1-Sept 4, 1926 Cases, 557; deaths, 218
Bangkok	May 2-June 12	23	20	
Do	July 4-Sept 4	55	44	
Spain				
Valencia	Aug 22-28	1		
Straits Settlements				
Singapore	Apr 25-May 1	1		
Do	July 11-17	1		
Sumatra				
Medan	Aug 22-28			One case varioloid
Switzerland				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tripolitania	Apr 1-30	11		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 29, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Tunisia				Apr 1-June 30, 1926 Cases, 17.
Tunis	Aug 11-30	2		
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks
Do	Aug 15-21			Do
Idutya district	May 23-29			Do
Natal	May 30-June 5			Do
Orange Free State	June 20-Aug 28			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Do	Aug 29-Sept 4	1		Native
Johannesburg	May 9-June 12	5		
Do	July 11-Sept 4	2		
Yugoslavia				Apr 15-30, 1926 Cases, 2, deaths, 1
Zagreb	Aug 9-15	2		
On vessels				
S S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed At Durban, Union of South Africa, June 16, 1926 One suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Do	July 21-Aug 31	3		
Argentina				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Do	Aug 1-31	9	1	
Bulgaria				Mar 1-June 30, 1926 Cases, 87, deaths, 14
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Valparaiso	Apr 29-May 5		1	
Do	Aug 14-Sept 18	7		
China				
Antung	June 14-27	7	1	
Do	June 28-Sept 12	29	1	
Canton	May 1-31	1		
Chungking	Aug 29-Sept 4			Present.
Ichang			1	Reported May 1, 1926 Occurring among troops.
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb. 1-May 31, 1926. Cases, 887; deaths, 91
Chemulpo	May 1-June 30	38	2	
Do	July 1-31	7	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Do	July 1-Aug 31	8		
Czechoslovakia				Jan 1-June 30, 1926: Cases, 156; deaths, 6.
Egypt:				
Alexandria	July 16-Aug 19	3		
Cairo	Jan 29-Mar. 4	74	17	
Do	July 23-Aug 5	1		
Port Said	June 4-24	4	1	
Do	July 9-Aug. 19	4	1	
Great Britain.				
Scotland—				
Glasgow	July 30-Aug 21	9	1	
Ireland (Irish Free State):				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerry County—				
Dingle	June 27-July 3	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to October 29, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Italy				Mar 8-May 8, 1926 Cases, 3
Palermo	Sept 12-18	1		
Japan				Mar 28-May 29, 1926 Cases, 37
Latvia				May 1-June 30, 1926 Cases, 19
Lithuania				May 1-June 30, 1926 Cases, 199, deaths, 22
Mexico				Feb 1-Apr 30, 1926 Deaths, 110.
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal District
Do	June 13-19	9		Do
Do	July 25-31	3		Do
Do	Aug 15-Sept 18	31		Do
San Luis Potosi	June 13-26			Present city and country
Morocco				Mar 1-June 30, 1926 Cases, 426
Norway				
Stavanger	Sept 6-12	1		
Palestine				Mar 1-June 30, 1926 Cases, 14, deaths, 1 Aug 10-Sept 13, 1926 Cases, 5
Gaza	July 6-12	1		
Haifa	July 13-Aug 30	5		
Halalal	Aug 17-23	1		
Jaffa district	June 15-28	5		
Jerusalem	Sept 14-20	1		
Majdal district	July 13-Aug 2	2		
Nazareth district	do	3		
Tiberias	Aug 3-9	1		
Yavneil	Aug 17-23	1		
Persia				
Teheran	May 23-June 22		1	
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85 June 27-July 24, 1926 Cases, 147, deaths, 11
Rumania				Mar 1-May 31, 1926 Cases, 711, deaths, 69
Russia				Jan 1-Mar 31, 1926 Cases, 14,814
Tunisia				Apr 1-June 30, 1926 Cases, 110
Tunis	June 11-30	3		
Turkey				
Constantinople	June 16-22	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths, 19
Do				July 1-31, 1926 Cases, 90, deaths, 17
Cape Province				Apr 1-June 30, 1926. Cases, 202, deaths, 24, native July 1-31, 1926 Cases, 58; deaths, 15
Glengray district	June 27-July 3			Outbreaks
Grahamstown	do	1		
Natal				Apr 1-June 30, 1926 Cases, 28 July 1-31, 1926 Cases, 23, deaths, 2
Durban	July 25-Aug 7	9	1	
Orange Free State				Apr 1-June 30, 1926 Cases, 24, deaths, 4 July 1-31, 1926 Cases, 7
Transvaal				Apr 1-June 30, 1926 Cases, 10, deaths, 5 July 1-31, 1926 Cases, 2 Aug 15-21, 1926 Outbreaks
Johannesburg	Aug 29-Sept 4	1		
Walkkerstroom district	June 20-26			Outbreaks
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 48, deaths, 7 July 1-Aug 31, 1926 Cases, 3, deaths, 1.
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 1-10	1		
Gold Coast	Apr 1-May 31	6	3	

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TREASURY DEPARTMENT

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BY THE UNITED STATES PUBLIC HEALTH SERVICE

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SPECIAL ARTICLES

Pan American Conference of Directors of Health

Report of the National Leper Home, Carville, La.

WASHINGTON
GOVERNMENT PRINTING OFFICE
1926

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C. C PIERCE, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912

They contain (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world. (2) Articles relating to the cause, prevention, or control of disease (3) Other pertinent information regarding sanitation and the conservation of the public health.

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CONTENTS

PUBLIC HEALTH REPORTS

VOL. 41 NOVEMBER 12, 1926 NO. 46

PAN AMERICAN CONFERENCE OF DIRECTORS OF HEALTH

In accordance with a recommendation of the Fifth International Conference of American Republics, which was held in Santiago, Chile, in 1923, the First Pan American Conference of National Directors of Public Health was convoked and the delegates met in Washington, September 27, 28, and 29, 1926

The inaugural session was held in the Hall of the Americas of the Pan American Union, where the Hon Joseph C Grew, Undersecretary of State, Dr. L S Rowe, Director General of the Pan American Union, and Surg Gen Hugh S. Cumming, Director of the Pan American Sanitary Bureau, made addresses of welcome These were appropriately answered by the delegates, in representation of their various countries

It is not possible to publish the full text of the welcoming addresses and the replies of the delegates at this time, but a complete report of the transactions of the conference will be published later (in Spanish), which will be available for distribution.

Among the most important results of the deliberations of the conference may be mentioned the creation of a permanent organization composed of the national directors of health of the respective countries affiliated with the Pan American Union, together with the officers of the Pan American Sanitary Bureau; and the work effected in the preparation of the program for the Eighth Pan American Sanitary Conference which will be held in Lima, Peru, from October 9 to 19, 1927

After the sessions of the conference, the delegates were welcomed to and attended many of the sessions of the Conference of the International Tuberculosis Union and of the National Tuberculosis Association of the United States. Later, some of the delegates went to New York, where they made trips of inspection to the United States quarantine and immigration stations, at Rosebank and Ellis Island.

Following is the official translation of the "Acta final" of the conference.

FIRST PAN AMERICAN CONFERENCE OF DIRECTORS OF PUBLIC HEALTH

WASHINGTON, D. C., U. S. A.

Summary of transactions

The inaugural session of the First Pan American Conference of National Directors of Health was convened in the building of the Pan American Union at Washington on September 27, 1926, the date set by the Pan American Sanitary Bureau in accordance with a resolution approved by the Fifth International Conference of American States.

The Surgeon General of the United States Public Health Service, Dr Hugh S. Cumming, presided over the session as provisional chairman

The Undersecretary of State of the United States, the Hon. Joseph C Grew, the Director General of the Pan American Union, Dr L S. Rowe, and Surg Gen. Hugh S. Cumming, Director of the Pan American Sanitary Bureau, welcomed the members of the conference, the delegates of each of the countries represented replying with appropriate speeches expressing their thanks. The conference considered and approved the regulations governing its sessions. At the same time, nominations were made for the offices of president, vice president, and secretary general of the conference, the following being unanimously elected: For president, Dr. Hugh S. Cumming; for vice president, Dr. Alfonso Pruneda, of Mexico; and for secretary general, Dr. Sebastián Lorente of Peru.

The following delegates of the countries represented and officers of the Pan American Sanitary Bureau were recognized as members of this conference:

Bolivia, Dr. Cleómedes Blanco Galindo and Dr. Manuel A. Villaroel; Brazil, Dr. Raul Leitão da Cunha; Chile, Dr. Lucas Sierra; Colombia, Dr. Pablo García Medina; Cuba, Dr. Fernando Rensoli, Dr. Mario G. Lebredo, and Dr. César Muxo; Dominican Republic, Dr. Ramón Báez, jr.; Ecuador, Dr. Pablo A. Suárez; Guatemala, Dr. José Azurdia; Haiti, Commander C. S. Butler and Mr. Raoul Lizaire; Honduras, Dr. Antonio Vidal M.; Mexico, Dr. Bernardo J. Gastélum; and Dr. Alfonso Bruneda, member of the Pan American Sanitary Bureau; Panama, Dr. Guillermo G. de Paredes, Paraguay, Dr. Andrés Gubetich; Peru, Dr. Sebastián Lorente; United States of America, Dr. Hugh S. Cumming, Dr. Samuel B. Grubbs, Dr. Bolívar J. Lloyd, Dr. Edward C. Ernst; and Venezuela, Dr. Carlos J. Bello.

In accordance with the respective provisions of the regulations, four committees were designated: (1) Committee on resolutions; (2) Committee on the Pan American Sanitary Code; (3) committee

on permanent organization; and (4) committee on sanitation and the administration of public health.

The committee on resolutions was composed of the following:

Dr Sebastián Lorente, of Peru, secretary general of the conference
Dr Raul Leitão da Cunha, of Brazil.
Dr Lucas Sierra, of Chile
Dr Pablo García Medina, of Colombia
Dr Andrés Gubetich, of Paraguay

The committee on the Pan American Sanitary Code was composed of the president, the secretary general of the conference, and the chief health officer of each country affiliated with the Pan American Union, and is charged with the duty of preparing and submitting to the Director of the Pan American Sanitary Bureau, not later than May 31, 1927, a report on the provisions of the Code.

The following delegates were chosen as members of the committee on permanent organization:

Dr. Sebastián Lorente, of Peru, secretary general of the conference
Dr Lucas Sierra, of Chile.
Dr Pablo García Medina, of Colombia
Dr Fernando Rensoli, of Cuba
Dr Andrés Gubetich, of Paraguay

The committee on sanitation and the administration of pubic health was composed of the delegate of highest rank from each country, or, if no distinction of rank existed, of the chief public health authority.

The conference considered, in its sessions of September 27, 28, and 29, all the matters and reports submitted. Dr. Sierra, of Chile, Dr. Lorente, of Peru; Dr. Vidal, of Honduras; D . Báez, of the Dominican Republic; Dr. Gubetich, of Paraguay; Dr. Suárez, of Ecuador, Dr. Bello, of Venezuela; Dr. Gastélum, of Mexico; Dr. Leitão da Cunha, of Brazil; Dr. Azurdia, of Guatemala; Dr. García Medina, of Colombia; Dr Blanco Galindo and Dr. Villaroel, of Bolivia; Dr. Rensoli, of Cuba; and Dr. Paredes, of Panama, outlined briefly the sanitary administrations of their respective countries. The propositions made during the period of the conference were submitted to the committee on resolutions.

At the meeting of September 29, the committee on resolutions presented to the conference its report on the matters which had been submitted for its study, and at the same session the conference approved the resolutions, recommendations, and measures given below:

The First Conference of National Directors of Health of the American Republics, meeting in the city of Washington, September

22. Organization in each country, in the respective departments of health, of a permanent commission for the study and eradication of malaria.

23. Organization of the study of climate and locality in relation to the epidemiology of disease

24. The conference recommends to the States of America which have not yet ratified the Sanitary Code approved at the Seventh Pan American Sanitary Conference, held in Habana in 1924, that they ratify this Code, making such reservations as they may deem necessary with respect to such articles as, for the time being, they may deem best not to accept.

25. To recommend to the governments the establishment of ministries of health, social welfare, and labor, where these do not already exist

26 A permanent organization is hereby effected, which shall be composed of the chief national public-health authorities of the countries affiliated with the Pan American Union, and also of the officers of the Pan American Sanitary Bureau.

27. To recommend that, in addition to the directors of public health of each country affiliated with the Pan American Union, the permanent organization should include the heads of the health services of the colonies or possessions in the American continent which may later become members of the Pan American Union

28. In view of the great educational value of motion pictures, the Pan American Sanitary Bureau is requested to undertake the production of films on subjects of hygiene and prophylaxis, and to supply the films in its possession, in turn, to the nations of the Pan American Union, for purposes of public-health education

29. The study and classification of rodent fleas by an expert entomologist in each country, and the forwarding of said data to the Pan American Sanitary Bureau. If there is no such expert available, the fleas shall be sent to the Sanitary Bureau, which shall undertake their study and classification.

30. The conference recommends to all governments that, in order that the Pan American Sanitary Bureau may more readily carry out the provisions contained in Article LVI of the Pan American Sanitary Code, they shall send to the Pan American Sanitary Bureau two copies of all official health publications, and, in addition, copies of all prevailing laws in each country bearing on health and sanitation.

31. The Conference of National Directors of Public Health shall meet every five years unless the Pan American Sanitary Bureau shall deem it expedient to convene such meeting at an earlier date.

32 A committee shall be named for the study of the measures adopted against the introduction of plague into the city of New York in order that its report may serve as a basis for the standardi-

zation of such procedures in all the countries of the Pan American Union. The committee shall be composed of Dr S B. Grubbs, Dr Lucas Sierra, and Dr Pablo Suárez

33. Recommendation is made to governments of countries where the cinchona tree grows to facilitate its cultivation and exploitation in order to be able to obtain quinine in quantity, quality, and at a price which may permit the intensification of the campaigns against malaria in the countr es of the Pan American Union.

34. The conference, before terminating its sessions, devoted a brief period of time to the memory of the great hygienist, Gen. William C Gorgas, whose labors for improvement in the hygiene of the American continent and of the world in general are worthy of the greatest admiration.

35. The conference also rendered grateful homage to the memory of the distinguished hygienists, Drs. Carlos J. Finlay and Henry R. Carter, to whom humanity owes invaluable services. This fact was communicated to the daughter of Doctor Carter and to Doctor Finlay's son.

To carry out these resolutions a committee was appointed, composed of Doctors Rensoli, of Cuba, Suárez, of Ecuador, Vidal, of Honduras, and Paredes, of Panama, who visited the widow of General Gorgas and the daughter of Doctor Carter, and also sent a telegram to Doctor Finlay's son in Cuba

36. A vote of thanks was tendered to Dr Hugh S. Cumming, Surgeon General of the United States Public Health Service, and Director of the Pan American Sanitary Bureau, to Dr. L S. Rowe, Director General of the Pan American Union, to Dr. Bolívar J. Lloyd, assistant to the Director of the Pan American Sanitary Bureau, to the members of the Pan American Sanitary Bureau and of the Pan American Union, and to the representatives of the American Government, for their efforts in the interest of this First Conference of National Directors of Public Health Services of the American Republics, and for its success.

(Signed) HUGH S. CUMMING,
President of the Conference.

(Signed) SEBASTIÁN LORENTE,
Secretary General of the Conference.

Report of Committee on Plague

The committee appointed by the First Pan American Conference of Directors of Health to formulate a program for the investigation of plague recommends that the Pan American Sanitary Bureau request each of its signatory powers to begin in one or more places, preferably ports, a plague survey of rats and fleas. It shall be the purpose of such surveys to more clearly define the factors of the spread of plague to the end that the degree of infectibility of a locality to plague may be determined as has been done in the instance of yellow fever through establishing the *stegomyia* index

(1) Live rats and other rodents are to be caught regularly each day throughout at least one continuous year

(2) Each rat is to be examined and classified and all ecto-parasites are to be collected, examined, and identified.

(3) Records are to be kept on standard blanks and all of the information called for on these blanks should be supplied in each instance. Other data called for on optional blanks may also be kept.

(4) In order that the classification of fleas may be uniform, specimens of each species are to be submitted to the expert designated by the Pan American Sanitary Bureau and confirmation of the classification made by such expert is to be considered as standard.

(5) Rodents, other than rats, and their ecto-parasites, are to be examined whenever possible, especially in those countries where they are domesticated.

It is believed that surveys as outlined above, if made by a considerable number of countries over a period of at least one year under identical circumstances, with records of results that are strictly comparable, will serve more definitely to fix upon the exact species and quantities of rodents and ecto-parasites that make possible the propagation of plague. In addition, other valuable data may be obtained which will accomplish the eradication of plague in a more efficient manner than is now possible.

NOTE.—Detailed instructions regarding the methods to be employed and copies of the blanks to be used are in preparation and will be distributed on request when available.

(Signed) Dr. LÚCAS SIERRA.
Dr. PABLO A. SUÁREZ.
S. B. GRUBBS.

THE NATIONAL LEPER HOME (MARINE HOSPITAL NO. 66)

Review of the More Important Activities During the Fiscal Year Ended June 30, 1926

By O E Denney, Surgeon (R) United States Public Health Service, Medical Officer in Charge

Since the United States Public Health Service assumed operation of this institution (formerly the Louisiana Leper Home) in 1921, 394 lepers have been hospitalized. In the fiscal year 1926, 62 lepers were admitted, and 25 absconded, 13 absconders returning for readmission.

Tabulation of the nativity of the patients in the hospital

Alabama	2	Bohemia	1
California	9	British Guiana	2
Florida	16	Canada	1
Georgia	2	Cape Verde Islands	1
Louisiana	94	Central America	1
Maryland	1	China	17
Minnesota	1	Dutch Guiana	1
Mississippi	4	Finland	2
Missouri	3	Germany	3
New Jersey	1	Greece	11
New York	3	Hungary	1
North Carolina	2	India	1
Ohio	1	Ireland	1
Oklahoma	1	Italy	8
Pennsylvania	2	Mexico	13
South Carolina	1	Palestine	3
Tennessee	1	Panama	1
Texas	12	Portugal	3
Virginia	1	Russia	3
Hawaii Territory	5	Spain	5
Philippine Islands	8	Sweden	1
Porto Rico	2	West Indies	3
Virgin Islands	1		
Bahama Islands	1	Total	259
Bermuda Islands	2		

Tabulation of admissions to the hospital by States

Alabama	1	Michigan	2
Arkansas	1	Montana	2
California	9	New Jersey	2
Florida	7	New York	4
Georgia	1	South Carolina	1
Illinois	2	Texas	5
Louisiana	20	Washington	1
Massachusetts	1		
Mississippi	1	Total	62
Missouri	2		

During the year three patients were paroled from the hospital, leprosy arrested and no longer a menace to the public health; another person voluntarily presented himself at the hospital for examination, having, at his own expense, crossed the continent believing, from newspaper readings, that he was suffering from leprosy; a careful examination revealed no symptoms of leprosy and he was refused admission to the hospital and returned to his former home. One leper was deported by the Bureau of Immigration

During the year, 94,359 hospital days were furnished. Twenty-nine lepers died, giving a mortality rate of 112 per 1,000 This mortality rate is slightly higher than normal, partly due to the fact that several lepers were admitted in terminal stages, almost moribund, and died soon after admission. The causes of death as confirmed by autopsy were as follows: Kidney malfunction, 8; cardio-vascular diseases, 6; tuberculosis, 5, pneumonia, 5; leprosy (apparently uncomplicated), 2, inoperable surgical conditions, 2; carcinoma, recurrent, 1.

Of significance with reference to the manner in which leprosy is contracted is the fact that in the hospital there are 6 veterans of the Spanish American War, 13 veterans of the World War, 3 veterans discharged from the military service because of disability, and 1 retired veteran—a total of 23 lepers who have had military service, some of whom had tropical service and probably contracted the disease while on foreign duty.

Seventy-five operations were performed during the year and 75,000 major and minor surgical dressings were made. Intravenous or intramuscular injections of mercurochrome, mercurophen, metaphen, bismuth, neo-salvarsan, and tryparsamide were continued in specific or experimental treatment.

A total of 37,902 physiotherapy treatments were given. Considerable improvement has been obtained in contractions or stiffness of joints and weaknesses of muscles, especially of the arms. Indurated areas have decreased, nerve pains have been relieved, and sensation in anesthetic areas of fingers and toes has returned in some cases Necrosis of bones has been arrested in some cases. Painful feet, flat feet, etc., have been relieved in many cases, and operations have resulted in marked benefit

The combination of contrast bath, radiant light, massage, and exercises has produced the most consistent results in the relief of contractions and the return of sensation in anesthetic areas. The ultra violet ray has proved very beneficial in nerve pains and ulcers.

Diathermy has not been used for a sufficient length of time to determine its exact value; but so far as it has been used it has become a helpful therapeutic measure apparently of great possibilities.

The most common affections of the eye have been superficial keratitis and iridocyclitis, the former leading ultimately to very poor vision through resulting opacities of the cornea and the latter to blindness through opacities of the lens The greater part of the current work with respect to the eye, has been devoted to staying the progress of these two affections, and a fair degree of success has been attained

With regard to neuropsychiatric work, 81 new cases of leprosy were examined and 150 reexaminations made of lepers previously studied. The neurological manifestations found in the 81 examined were of varied degrees of severity and consisted of sensory, motor, vasomotor, and trophic disturbances, five cases showing undoubted psychotic disturbances. One case of praecox type showed marked improvement during the last three months Two cases of amentia previously reported continue to show ravages of mental deterioration.

Treatment with chaulmoogra oil is being continued in a large group of patients, and, while no spectacular results have been obtained with either the oral administration of the crude oil or the intramuscular injection of its ethyl esters, it appears that definite improvement has followed in a sufficiently large percentage of cases to encourage the patients in the continuation of the treatment.

Impressed with the improvement in some cases following oral administration of large doses of the crude oil, an attempt is now being made to increase the dose tolerated by the stomach by the use of enteric capsules. Not enough data have been collected to warrant conclusions, but up to the present time nausea has not occurred in any of the few cases taking the oil in these capsules, notwithstanding the fact that much larger doses are being given than could be tolerated in ordinary capsules. How much, if any, of the oil is lost to the patient by passage of the unbroken capsule through the alimentary canal has not been determined, but reports indicate that this occurrence is infrequent.

Here, as in many other institutions for the treatment of leprosy, crude chaulmoogra oil is held in much esteem by many of the patients. Regret is frequently expressed that they can not tolerate larger doses. The enteric capsules are being tried in these cases in the hope that maximum doses can be given to a large number of patients and a fairer estimate obtained of the therapeutic value of the oil than has been previously possible on account of the limited tolerance so often exhibited. If nausea and vomiting can be eliminated, the oral route should permit of the administration of 60 or more times the amount of oil that it has been possible to give by the intramuscular injection of the ethyl esters.

Laboratory investigations have continued with one full-time medical officer and one assistant technician and with part time of a

second medical officer; 4,324 routine examinations were made, including autopsies and histologic examination of the tissues; 2,405 special examinations were made for research purposes

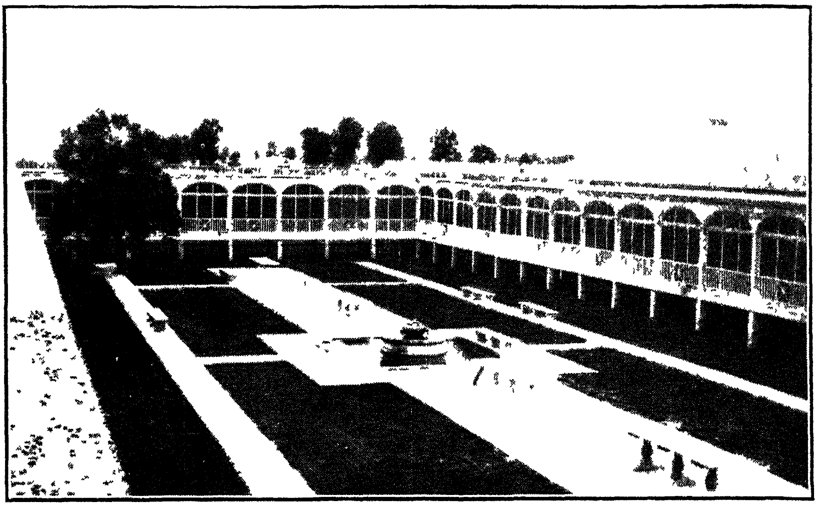
The Staff Journal Club, which was organized for the purpose of reviewing medical literature, has rearranged its meetings to conform to the Regulations requiring weekly staff meetings. At these meetings, abstracts of medical literature are presented by the members of the staff in rotation, case histories are read and discussed, and a member of the staff presents reports on original observations on leprosy.

During the year, 31 physicians, 56 nurses, and 60 medical students visited the hospital for the purpose of familiarizing themselves with leprosy. The Sixth District Dental Society held its quarterly meeting in the hospital in order that, at its scientific session, the dentists might be given a demonstration of the oral manifestations of leprosy. Sixty-five dentists attended the meeting.

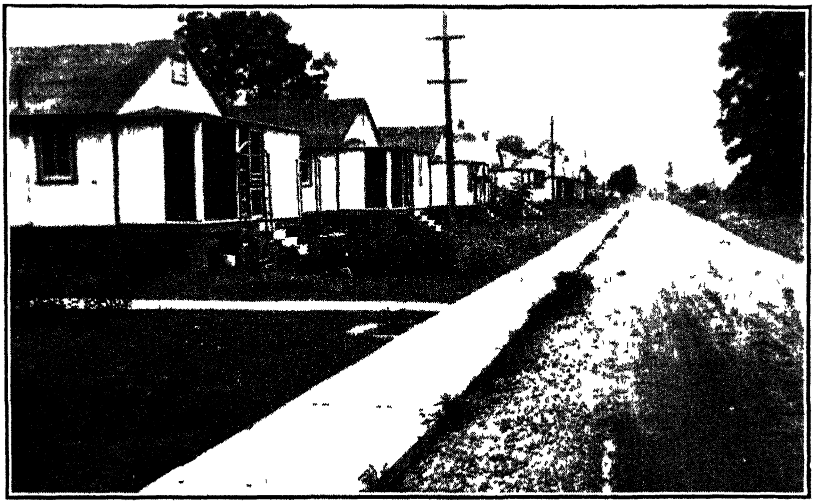
The library, operated by the patients, is becoming an ever-increasing source of information and entertainment. Magazines and newspapers are held in the library or lent on card until the issue is out of date and then are distributed upon application. During the year approximately 2,000 loans of current magazines were made and approximately 500 books of fiction, history, or current information were lent by the librarian.

Under the supervision of a resident representative of the Supervising Architect's office, there has been constructed a modern dairy barn having facilities for 80 milk cows, with calf pens, bull pens, maternity pens, feed-storage rooms, milk-cooling rooms, and showers and toilets for the attendants. The barn is equipped with overhead tracks for the movement of feed and for the removal of manure. A reinforced concrete septic tank has been built adjoining the dairy barn for the sanitary disposal of fluid excreta. Pending the availability of additional funds for the construction of other necessary dairy facilities, temporary structures have been erected to house feed-chopping machines, to store forage, etc. During the year the cattle herd was registered as nontuberculous as a result of repeated tests made under the direction of Federal and State authorities.

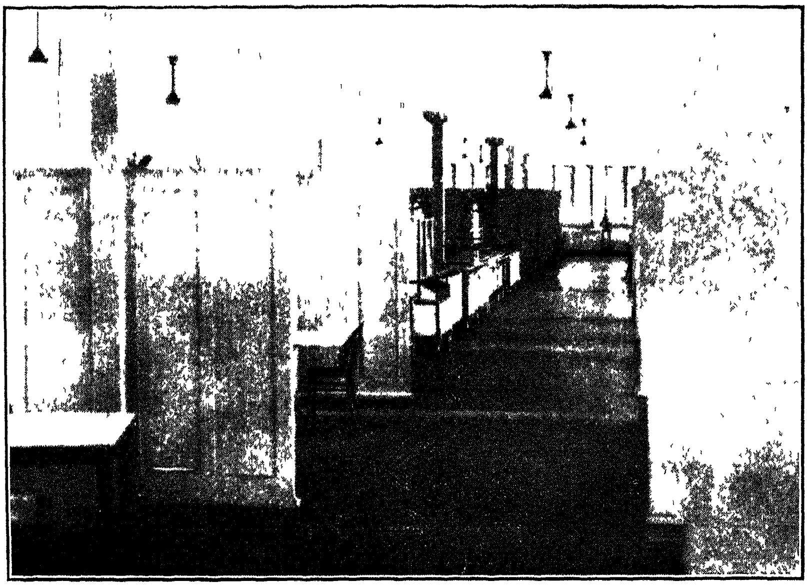
A formal tea garden, or patio, with a fountain, was constructed in the open rectangle immediately in front of the new kitchen and mess hall. This patio is being beautified with ornamental trees and shrubs and will add to the attractiveness of the mess hall. Similarly, a fountain has been constructed in the court immediately in front of the proposed new infirmary building, thereby promoting the continuous scheme for beautifying this particular spot prior to construction of the infirmary building.



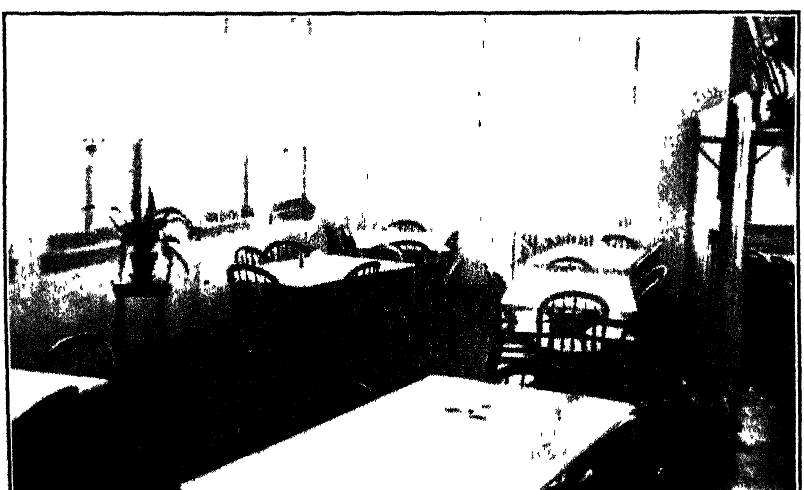
Quadrangle, facing patients' kitchen and mess hall



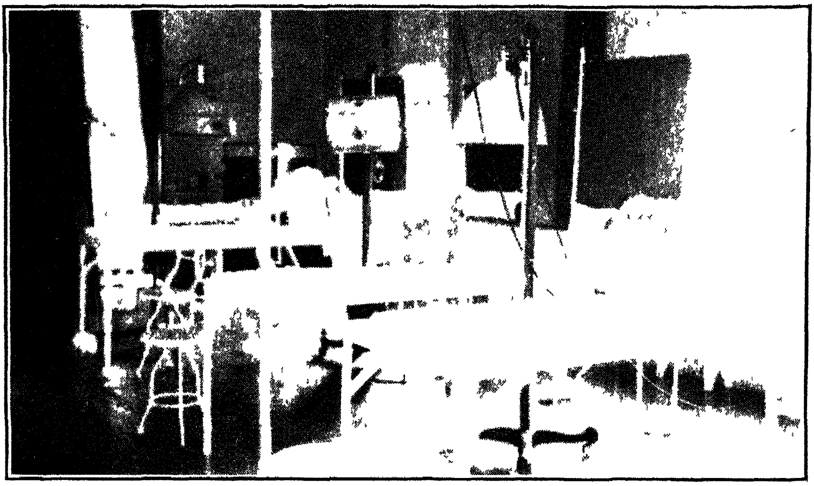
Concrete walks, serving also as covers for the conduits carrying the steam and water pipes



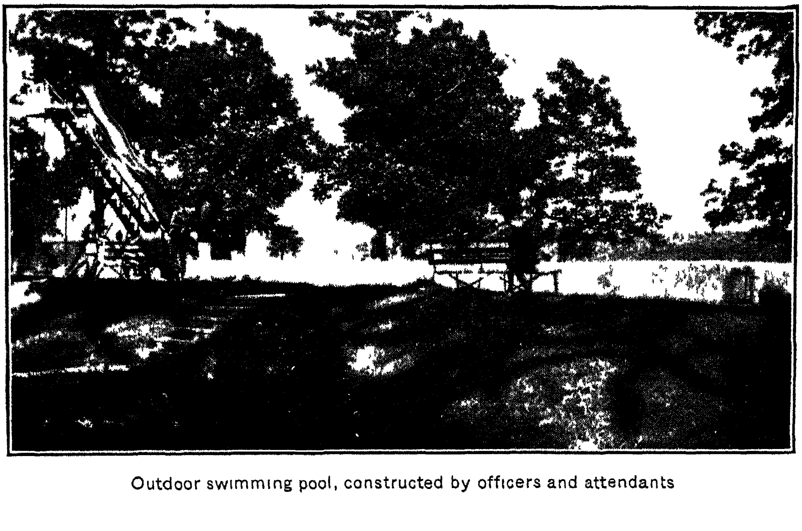
Patients' kitchen and mess hall—cafeteria arrangement



One of the cubicles in patients' mess hall These cubicles accommodate 24 patients

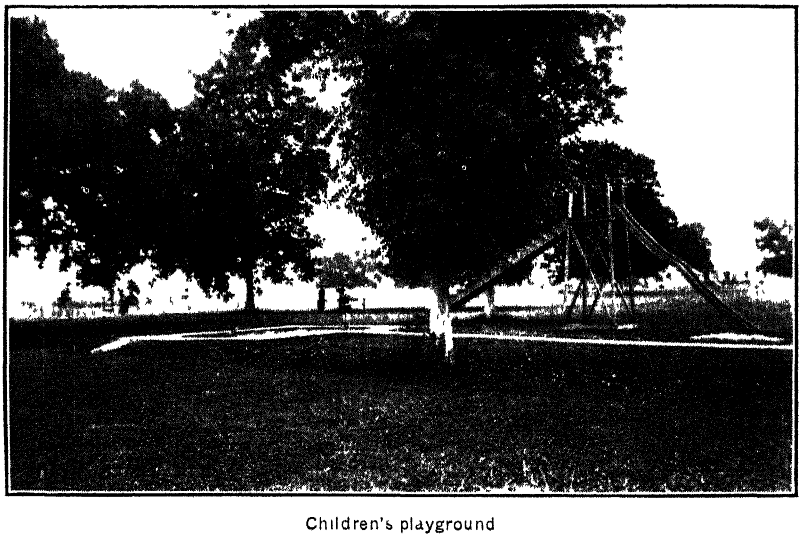


Physiotherapy department, showing electrotherapy wing



Outdoor swimming pool, constructed by officers and attendants

Rose garden and tea house



Children's playground

The crowded and very unsatisfactory dining-room quarters available for certain employees necessitated the construction of a temporary dining room adjoining the administration building for the use of negro employees This will serve its purpose satisfactorily until the completion of the authorized permanent addition to the administration building With surplus materials and station labor, a carpenter shop has been built, containing an electrically driven plane, a band saw, a shaper, a wood lathe, and other machinery. A blacksmith shop and a paint shop were similarly constructed

During the year this locality was visited by unprecedented rain storms, so that the portion of the reservation known as "The Lake," which had recently been cleared and put under cultivation, became flooded, owing to the fact that the drainage canals carrying off surplus rain water had become blocked on adjoining properties, and it became necessary to install compressed air lifts to pump the water from the lake. These air lifts became completely effective once the heavy, continuous rains had stopped, and the lake is again available for the cultivation of forage, although the crops already planted were lost

During the year all exposed water and steam lines serving the officers' and attendants' quarters were removed from their unsightly housing in wooden conduits above ground and were placed in concrete conduits, the tops of which serve as sidewalks, thus effectively dispensing with the large amount of waste energy due to radiation from the exposed steam and water lines and adding considerably to the neat appearance of the reservation.

During the year a corps of carpenters and painters has continued routine repair and maintenance of the 93 buildings on the reservation.

The approved scheme for beautification of the reservation has been followed. A number of shade trees, consisting of Lombardy poplars and American lindens and a variety of flowering shrubs have been planted, as well as a large number of palms, date, and *Washingtonia robusta.* A nursery of live oaks, the trees being now young saplings, will be available for transplanting at an early date; and these trees, although they will not furnish shade for the present generation, will no doubt afford refreshing physical comfort and esthetic pleasure in future years.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Plague in South Africa.—Anon. *Health*, Commonwealth of Australia, vol. 4, No. 4, July, 1926, pp. 127–128. (Abstract by J. L. Robertson.)

This article gives the history of plague in South Africa since its introduction during the Boer War, accompanied by a discussion of its perpetuation and dissemination by field rodents, the gerbille

serving as a main reservoir of infection, and the multimammate mouse acting as main intermediary between the gerbille and human habitation Infection flares up into epizootic prevalence among these animals in warm weather, coinciding with the seasonal prevalence of insects, especially fleas

Field surveys have been carried out in order to determine the extent of prevalence of infection and the distribution of veldt rodents liable to infection. A map accompanies the article showing the results of the survey effected up to the middle of 1925

Dr J A Mitchell, secretary of public health of the Union, emphasizes the fact that the balance of nature has been disturbed, due to destruction of natural enemies of the rodents by increased farming

That the risk of extension of infection to the domestic population of rail towns and ports is realized is evidenced by the plague conference which convened at Bloemfontein in November, 1924. A comprehensive plan of campaign was formulated, and urban local authorities have taken active measures against rats. In the meantime the survey and campaign against veldt rodents has been continued.

Paratyphoid Bacillus B. in Canned Ripe Olives.—W. R. Stokes. Jour. Am. Med. Assoc., 1925, vol 85, p. 1305 (1 ref) (Abstract by W. G. Savage.) From *Bulletin of Hygiene*, vol. 1, No. 2, February, 1926, p. 102.

"Two persons who ate the contents of a glass jar of ripe olives suffered, after an incubation period of about 24 hours, from fever, vomiting, and diarrhea, but with no symptoms of botulism. A guinea pig injected subcutaneously with 1 c. c. of the olive juice died after 24 hours, and from the spleen an organism culturally identical with the paratyphoid B. bacillus was isolated. This organism was agglutinated by paratyphoid B serum in a dilution of 1 : 800 (titre 1: 1,600). Stool examinations made after the patients had recovered failed to reveal any paratyphoid bacilli The colon bacillus and *B. proteus vulgaris* were isolated also from the juice and tissue of the ripe olives.

"(The facts suggest that a *salmonella* strain was responsible for the food-poisoning outbreak, but there is no evidence adduced that this was true *B. paratyphosus* B.)"

A Study of Milk Problems in Canada.—Dr. M. M. Seymour. *The Public Health Journal*, vol. 17, No. 6, June, 1926, pp. 295–301; No. 7, July, 1926, pp 353–358; No. 8, August, 1926, pp 394-404. (See Pub. Health Rep., July 16, 1926, p. 1477) (Abstract by R. E. Tarbett.)

The second installment of the report continues with statement from the various health departments as to the various causes giving them the greatest trouble in properly controlling the milk supplies.

The situation regarding Pasteurization is covered briefly, Quebec, Vancouver, and Victoria being the only large cities not favoring Pasteurization The balance of the second installment of the report is taken up with suggestions by various health officers as to educational methods

The third installment takes up the question of Pasteurization and tuberculin tests The standard definition for Pasteurization recommended by the committee is as follows: "Pasteurized milk is milk which has been heated to a temperature of not less than 142° F, and not more than 145° F., held at such temperature for not less than 30 minutes and then immediately cooled to a temperature of 50° F., and held at or below this temperature until delivered to the customer." Control of Pasteurization plants is discussed. Because of the use of inferior equipment and lack of knowledge as to operation, four suggestions are made relative to control, particularly in reference to new plants: (1) That a prospective plant furnish satisfactory proof of its ability properly to finance a plant, (2) that operators be required to have experience and be licensed; (3) that plants be licensed and required to pass a two or three months' probationary period, (4) that failure to comply with milk regulations would cause a cancellation of the license. Municipal Pasteurizing plants are suggested and compared with municipal water plants. Pasteurization of milk on the farm, while generally impracticable, might be possible with some of the larger dairies.

The necessity for having all milk cattle tuberculin tested is discussed. The means available for the testing of cows, Federal, provincial, and local, are outlined and discussed. Owing to inadequate appropriations, the proper inspection and laboratory control is generally not adequate.

Suggested essentials for a minimum standard for conditions under which milk is produced are given. It is pointed out that standardization and legislation can not be carried too far, and that officials should be given some opportunity to exercise their common sense.

Bombay Corporation Waterworks—Some Trouble over Rapid Filtration Plant.—Anon. *The All-India Local and Municipal Self-Government Gazette*, vol. 13, No. 1, July, 1926, pp. 28–32. (Abstract by E. C. Sullivan.)

This article is concerned with the failure of the contractors for a filtering plant at Powai Lake to construct a plant which would give the guaranteed quality of effluent within the limits of expenditure guaranteed by the contractors. Although the contractors were granted a period of several months to operate and improve the plant so as to obtain an effluent of desired quality, these efforts resulted in failure and the contractors have been called upon to withdraw from

the contract, in order that the work of completing the plant may be entrusted to other parties.

The quality of effluent which was guaranteed in the contract was as follows: (*a*) The filtered effluent shall not contain more than 100 total colonies per c. c. agar count; (*b*) absence of lactose fermenters in 50 c. c.; (*c*) absence of *B. coli* (Houston's) in 50 c. c.; (*d*) absence of free ammonia; (*e*) albuminoid ammonia not to exceed 0.1 part per million; (*f*) absence of free residual chlorine before entering the main after chlorine treatment; (*g*) freedom from taste and odor when heated to 37° C.; (*h*) removal of 100 per cent of suspended matter, (*i*) clarity to be such that a platinum wire $\frac{1}{25}$ inch diameter shall be discernible 6 feet beneath the surface at midday; and (*j*) it shall have no acid reaction under any circumstances and shall not contain more than one part per 100,000 alkalinity ($CaCO_3$).

The limits of consumption to produce an effluent of this quality must be guaranteed not to exceed (1) in the case of wash water, 1 per cent of quantity of water filtered; (2) in the case of alum 0 75 grains per gallon of water filtered; and (3) in the case of chlorine 15 pounds of bleach (30 per cent chlorine) per million gallons of water filtered.

Soil Acidity and Survival of Hookworm Larvae.—A critical commentary by L Fabian Hirst. *Indian Medical Gazette*, vol. 61, No. 1, January, 1926, pp. 14–17. (Abstract by D. L. Augustine.)

The author calls attention to the fact that his use of the term "hookworm larvae" in a former paper (Investigation on the Epidemiology of Hookworm Disease in Colombo. Part I: On the isolation and identification of infective nematode larvae. Part II: Observations on the Viability of Hookworm Larvae. *Ceylon Jour. Science*, Section D, Vol I, pp. 1–15) includes the whole history of the larvae from its emergence from the ovum to its death or penetration through the skin of man It is emphasized that in their brief cultural stage the larvae are especially vulnerable to physical agencies, such as high acidity, while the mature larvae are highly resistant to the action of a variety of disinfectants and other physical agencies generally harmful to living protoplasm.

The author states that well-grown infective larvae can probably live up to six months under average tropical conditions and possibly much longer under specially favorable circumstances. Such statements are misleading and carry with them the idea that all of a given number of infective hookworm larvae live for that length of time. It has been demonstrated repeatedly that only a very small percentage of them ever have a life span greater than two or three months under natural conditions, and that the majority of them perish within a month after the deposition of the stool containing the ova.

Soil Acidity and Survival of Hookworm Larvae.—A reply to Doctor Hirst's critical commentary, by Asa C Chandler *Indian Medical Gazette*, vol 61, No. 1, January, 1926, pp 17–18. (Abstract by D L Augustine)

The difficulty of determining the effect of soil acidity as a single factor in the development of hookworm larvae is discussed The author has observed that infective larvae do develop in considerable numbers in acid soils, he having isolated over 1,500 from a pint of Assam soil with a pH of 5 5. All these larvae appeared healthy and were well supplied with nutritional granules.

Incidence of Hookworm Disease in Mexico.—(Incidencia de la Uncinariasis en Mexico) Andrew J Warren and Henry P Carr Editorial, *Cultura*, Mexico, 1925, pp. 1–84 (Abstract by M. A. Barber)

In this work the authors take into account the degree as well as the extent of hookworm infestation They make use of the well-known relation existing between the number of hookworm eggs found in a unit amount of feces and the number of worms harbored by the individual. On this basis the severity of hookworm prevalence is mapped out for the different regions of Mexico, and determined for groups of different age, sex, and occupation The region of greatest infestation in Mexico lies in a zone of heavy rainfall lying more or less parallel with the Gulf and extending, approximately, from Yucatan to the State of Tamulipas. *Necator americanus* is the prevailing species of hookworm, comprising 92.3 per cent of the total number determined: *Ankylostoma duodenale* included but 7.7 per cent.

The article includes many tables, maps, and charts, as well as full descriptions of the climatology of the regions surveyed and of the technique employed. This short review can give but an inadequate estimate of the extent and value of this piece of work.

Notes on the Effect of Burial of Infective Hookworm Larvae.—W. W. Cort. *Jour. Parasit* 1925, vol. 12, pp. 33–38 (4 refs). Abstract by J. F. C. H., *Bulletin of Hygiene*, vol 1, No 4, April, 1926, p. 305.

"The author describes preliminary experiments undertaken with a view to determining the movements and fate of buried hookworm larvae. In general his results confirm the views of Payne, that conditions associated with the movement of ground water have a more important bearing upon upward migration than has the actual degree of moisture or dryness."

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended November 6, 1926

ALABAMA	Cases
Chicken pox	5
Dengue	1
Diphtheria	98
Influenza	67
Lethargic encephalitis	3
Malaria	59
Measles	6
Mumps	1
Pellagra	4
Pneumonia	29
Poliomyelitis	1
Scarlet fever	15
Smallpox	5
Tuberculosis	21
Typhoid fever	28
Typhus fever	1
Whooping cough	3

ARIZONA	Cases
Measles	6
Scarlet fever	10
Trachoma	8
Tuberculosis	27
Typhoid fever	3

ARKANSAS	Cases
Chicken pox	9
Diphtheria	11
Hookworm disease	3
Influenza	61
Malaria	46
Measles	4
Mumps	12
Pellagra	4
Scarlet fever	17
Trachoma	3
Tuberculosis	7
Typhoid fever	24
Whooping cough	29

CALIFORNIA	Cases
Cerebrospinal meningitis—Stockton	4
Chicken pox	199
Diphtheria	142
Influenza	12
Measles	579
Mumps	170
Poliomyelitis	
Long Beach	2
Los Angeles	1
Orange County	1
Riverside	1
Scarlet fever	200
Smallpox	13
Tuberculosis	194
Typhoid fever	18
Whooping cough	67

COLORADO	Cases
Chicken pox	63
Diphtheria	28
German measles	1
Hookworm disease	1
Measles	13
Mumps	3
Pneumonia	2
Poliomyelitis	1
Scarlet fever	62
Septic sore throat	1
Smallpox	7
Tuberculosis	14
Typhoid fever	26
Whooping cough	24

CONNECTICUT	Cases
Chicken pox	81
Diphtheria	26
German measles	2
Influenza	7

CONNECTICUT—continued

	Cases
Malaria	1
Measles	6
Mumps	8
Pneumonia (broncho)	23
Pneumonia (lobar)	18
Scarlet fever	47
Septic sore throat	1
Tuberculosis (all forms)	20
Typhoid fever	4
Whooping cough	30

DELAWARE

Chicken pox	4
Diphtheria	2
Mumps	1
Scarlet fever	27
Tuberculosis	2
Whooping cough	4

FLORIDA

Chicken pox	1
Diphtheria	62
Influenza	1
Malaria	6
Measles	3
Mumps	1
Paratyphoid fever	1
Pneumonia	1
Scarlet fever	10
Smallpox	7
Tetanus	1
Tuberculosis	9
Typhoid fever	7
Whooping cough	4

GEORGIA

Cerebrospinal meningitis	1
Chicken pox	4
Dengue	4
Diphtheria	83
Dysentery	7
Hookworm disease	3
Influenza	70
Malaria	42
Measles	4
Mumps	4
Pellagra	5
Pneumonia	26
Scarlet fever	38
Septic sore throat	8
Smallpox	6
Tuberculosis	16
Typhoid fever	27
Typhus fever	2
Whooping cough	9

IDAHO

Cerebrospinal meningitis—St Maries	1
Chicken pox	8
Diphtheria	7
Measles	8
Mumps	3
Scarlet fever	42

ILLINOIS

	Cases
Cerebrospinal meningitis	
Clinton County	1
Will County	1
Chicken pox	289
Diphtheria	144
Influenza	16
Lethargic encephalitis	
Cook County	1
Knox County	1
Measles	181
Mumps	40
Pneumonia	196
Poliomyelitis	
Cook County	1
Winnebago County	1
Scarlet fever	254
Smallpox	1
Tuberculosis	228
Typhoid fever	44
Whooping cough	234

INDIANA

Chicken pox	94
Diphtheria	112
Influenza	23
Measles	24
Pneumonia	10
Poliomyelitis	2
Scarlet fever	127
Smallpox	29
Tuberculosis	30
Typhoid fever	37
Whooping cough	48

IOWA

Chicken pox	56
Diphtheria	30
German measles	1
Measles	20
Mumps	5
Pneumonia	1
Scarlet fever	59
Tuberculosis	5
Typhoid fever	1
Whooping cough	8

KANSAS

Chicken pox	47
Diphtheria	97
German measles	1
Lethargic encephalitis	1
Measles	110
Mumps	2
Pneumonia	25
Poliomyelitis—Sterling	1
Scarlet fever	80
Trachoma	1
Tuberculosis	26
Typhoid fever	20
Whooping cough	19

LOUISIANA

Diphtheria	54
Hookworm disease	10
Influenza	10
Lethargic encephalitis	1

LOUISIANA—continued

	Cases
Malaria	69
Pneumonia	24
Poliomyelitis	1
Scarlet fever	16
Smallpox	2
Tuberculosis	18
Typhoid fever	19

MAINE

Chicken pox	8
Diphtheria	1
Influenza	2
Measles	69
Mumps	3
Pneumonia	10
Scarlet fever	18
Tuberculosis	5
Typhoid fever	7
Vincent's angina	1
Whooping cough	24

MARYLAND [1]

Chicken pox	66
Diphtheria	50
German measles	3
Impetigo contagiosa	3
Influenza	8
Measles	9
Mumps	7
Ophthalmia neonatorum	1
Paratyphoid fever	2
Pneumonia (broncho)	20
Pneumonia (lobar)	17
Poliomyelitis	1
Scarlet fever	45
Septic sore throat	6
Tuberculosis	46
Typhoid fever	29
Whooping cough	65

MASSACHUSETTS

Cerebrospinal meningitis	2
Chicken pox	208
Conjunctivitis (suppurative)	3
Diphtheria	83
German measles	6
Influenza	12
Lethargic encephalitis	1
Measles	33
Mumps	111
Ophthalmia neonatorum	25
Pneumonia (lobar)	49
Poliomyelitis	10
Scarlet fever	249
Septic sore throat	1
Tuberculosis (pulmonary)	82
Tuberculosis (other forms)	40
Typhoid fever	12
Whooping cough	86

MICHIGAN

Diphtheria	164
Measles	47
Pneumonia	80
Scarlet fever	210

[1] Week ended Friday.

MICHIGAN—continued

	Cases
Smallpox	10
Tuberculosis	42
Typhoid fever	10
Whooping cough	107

MINNESOTA

Chicken pox	120
Diphtheria	87
Influenza	3
Measles	102
Pneumonia	6
Scarlet fever	224
Smallpox	3
Tuberculosis	50
Typhoid fever	6
Whooping cough	11

MISSISSIPPI

Diphtheria	36
Scarlet fever	11
Smallpox	1
Typhoid fever	14

MISSOURI

(Exclusive of Kansas City, St Joseph, and Springfield)

Cerebrospinal meningitis	1
Chicken pox	30
Diphtheria	76
Epidemic sore throat	4
Influenza	6
Malaria	2
Measles	20
Mumps	4
Pneumonia	2
Scarlet fever	80
Tuberculosis	15
Typhoid fever	36
Whooping cough	102

MONTANA

Chicken pox	38
Diphtheria	1
Measles	128
Scarlet fever	70
Smallpox	28
Tuberculosis	1
Typhoid fever	3
Whooping cough	4

NEBRASKA

Chicken pox	38
Diphtheria	7
German measles	2
Influenza	5
Measles	3
Mumps	1
Pneumonia	2
Poliomyelitis	3
Scarlet fever	28
Septic sore throat	1
Smallpox	12
Tuberculosis	4
Typhoid fever	3
Whooping cough	29

NEW JERSEY

	Cases
Chicken pox	122
Diphtheria	117
Dysentery	1
Influenza	6
Measles	12
Paratyphoid fever	2
Pneumonia	96
Poliomyelitis	2
Scarlet fever	101
Typhoid fever	21
Whooping cough	97

NEW MEXICO

Chicken pox	2
Conjunctivitis	1
Diphtheria	2
German measles	4
Measles	2
Mumps	1
Pnuemonia	1
Scarlet fever	20
Tuberculosis	44
Typhoid fever	10
Whooping cough	1

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	3
Chicken pox	348
Diphtheria	92
German measles	15
Influenza	5
Measles	382
Mumps	86
Ophthalmia neonatorum	2
Pneumonia	166
Poliomyelitis	4
Scarlet fever	101
Smallpox	6
Trachoma	3
Typhoid fever	25
Vincent's angina	10
Whooping cough	258

NORTH CAROLINA

Cerebrospinal meningitis	2
Chicken pox	42
Diphtheria	190
German measles	4
Malaria	14
Measles	8
Poliomyelitis	3
Scarlet fever	94
Septic sore throat	3
Smallpox	30
Typhoid fever	33
Whooping cough	203

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Chicken pox	8
Diphtheria	55
Influenza	96
Malaria	95
Pneumonia	25

[2] Deaths

OKLAHOMA—continued

	Cases
Poliomyelitis	
Muskogee County	1
Pittsburg County	1
Scarlet fever	48
Smallpox	24
Typhoid fever	75

OREGON

Chicken pox	23
Diphtheria	9
Influenza	19
Measles	12
Mumps	10
Pneumonia	[2] 8
Poliomyelitis	1
Scarlet fever	37
Septic sore throat	1
Smallpox	9
Tuberculosis	15
Typhoid fever	4
Whooping cough	10

PENNSYLVANIA

Anthrax—Montgomery County	1
Cerebrospinal meningitis—Huntingdon	1
Chicken pox	325
Diphtheria	173
German measles	8
Impetigo contagiosa	17
Measles	276
Mumps	29
Ophthalmia neonatorum—Philadelphia	3
Pneumonia	25
Poliomyelitis—	
Ambridge	1
Philadelphia	2
Scattering	3
Scabies	10
Scarlet fever	278
Tetanus—	
Hellam	1
Lebanon	1
Tuberculosis	101
Typhoid fever	91
Whooping cough	250

RHODE ISLAND

Chicken pox	10
Diphtheria	17
Influenza	10
Measles	9
Scarlet fever	18
Tuberculosis	5
Typhoid fever	1
Whooping cough	2

SOUTH DAKOTA

Chicken pox	14
Diphtheria	20
Measles	60
Mumps	2
Pneumonia	1
Poliomyelitis	1
Scarlet fever	71
Smallpox	2
Trachoma	2
Typhoid fever	4
Whooping cough	21

TENNESSEE

	Cases
Chicken pox	6
Diphtheria	100
Dysentery	31
Influenza	47
Malaria	28
Measles	5
Mumps	1
Pellagra	5
Scarlet fever	58
Tuberculosis	28
Typhoid fever	65
Whooping cough	39

TEXAS

Anthrax	2
Chicken pox	16
Diphtheria	84
Dysentery	2
Influenza	411
Measles	3
Mumps	6
Paratyphoid fever	2
Pellagra	3
Pneumonia	11
Poliomyelitis	2
Scarlet fever	83
Smallpox	4
Trachoma	102
Tuberculosis	23
Typhoid fever	43
Whooping cough	34

UTAH

Chicken pox	40
Diphtheria	10
Influenza	2
Measles	106
Mumps	1
Pneumonia	2
Scarlet fever	17
Smallpox	1
Typhoid fever	9
Whooping cough	2

VERMONT

Chicken pox	15
Diphtheria	1
Measles	135
Mumps	7
Scarlet fever	2
Typhoid fever	1
Whooping cough	54

WASHINGTON

Cerebrospinal meningitis	
Aberdeen	1
Cowlitz County	1
Douglas County	1
Seattle	1
Spokane	1
Chicken pox	130
Diphtheria	53
German measles	4
Measles	33

WASHINGTON—continued

	Cases
Mumps	24
Pneumonia	1
Poliomyelitis	1
Scarlet fever	60
Smallpox	26
Tuberculosis	48
Typhoid fever	17
Whooping cough	9

WEST VIRGINIA

Cerebrospinal meningitis—Wood County	1
Chicken pox	35
Diphtheria	57
Influenza	7
Measles	15
Scarlet fever	74
Tuberculosis	16
Typhoid fever	50
Whooping cough	85

WISCONSIN

Milwaukee	
Chicken pox	56
Diphtheria	14
German measles	5
Measles	4
Mumps	19
Pneumonia	11
Scarlet fever	20
Tuberculosis	8
Whooping cough	71
Scattering:	
Cerebrospinal meningitis	3
Chicken pox	160
Diphtheria	42
German measles	3
Influenza	55
Measles	173
Mumps	46
Pneumonia	14
Poliomyelitis	2
Scarlet fever	81
Smallpox	3
Trachoma	1
Tuberculosis	21
Typhoid fever	10
Whooping cough	87

WYOMING

Chicken pox	11
German measles	1
Influenza	5
Measles	17
Mumps	6
Pneumonia	4
Poliomyelitis	
Crook County	1
Lincoln County	1
Scarlet fever	23
Septic sore throat	1
Tuberculosis	2
Typhoid fever	6
Whooping cough	23

Reports for Week Ended October 30, 1926

CALIFORNIA

	Cases
Cerebrospinal meningitis	
Los Angeles	1
Sacramento	1
San Joaquin County	3
Chicken pox	164
Diphtheria	150
Influenza	21
Jaundice (epidemic)	4
Measles	584
Mumps	103
Poliomyelitis—Los Angeles	1
Scarlet fever	207
Smallpox	14
Tuberculosis	177
Typhoid fever	18
Whooping cough	46

DISTRICT OF COLUMBIA

Chicken pox	3
Diphtheria	41
Influenza	2
Pneumonia	21
Poliomyelitis	1
Scarlet fever	11
Tuberculosis	28
Typhoid fever	4
Whooping cough	9

INDIANA

Chicken pox	40
Diphtheria	114
Influenza	48
Measles	16
Mumps	2
Pneumonia	8
Poliomyelitis	2
Scarlet fever	112
Smallpox	8
Tuberculosis	54
Typhoid fever	38
Whooping cough	31

MINNESOTA

Chicken pox	147
Diphtheria	81
Influenza	1
Measles	138
Pneumonia	2
Poliomyelitis	2
Scarlet fever	253
Smallpox	1
Tuberculosis	39
Typhoid fever	4
Whooping cough	29

NORTH DAKOTA

Chicken pox	15
Diphtheria	4
Measles	49
Mumps	2

NORTH DAKOTA—continued

	Cases
Scarlet fever	34
Smallpox	9
Trachoma	40
Tuberculosis	3
Typhoid fever	3
Whooping cough	1

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Diphtheria	41
Influenza	87
Malaria	210
Pellagra	9
Pneumonia	29
Scarlet fever	27
Smallpox	32
Typhoid fever	88
Whooping cough	13

PENNSYLVANIA

Cerebrospinal meningitis—Philadelphia	1
Chicken pox	478
Diphtheria	208
German measles	5
Impetigo contagiosa	29
Measles	410
Mumps	75
Ophthalmia neonatorum—Philadelphia	1
Pneumonia	35
Poliomyelitis	
Cameron County	1
Philadelphia	1
Wyoming County	1
Puerperal fever	2
Rabies—Scranton	1
Scabies	3
Scarlet fever	278
Tetanus—Lebanon	1
Tuberculosis	90
Typhoid fever	71
Whooping cough	279

SOUTH CAROLINA

Chicken pox	23
Dengue	6
Diphtheria	122
Hookworm disease	32
Influenza	551
Malaria	725
Measles	3
Paratyphoid fever	2
Pellagra	39
Poliomyelitis	10
Scarlet fever	24
Smallpox	2
Tuberculosis	32
Typhoid fever	59
Whooping cough	35

WISCONSIN

Milwaukee	Cases
Chicken pox	93
Diphtheria	20
German measles	1
Measles	4
Mumps	17
Pneumonia	13
Scarlet fever	19
Tuberculosis	9
Whooping cough	43
Scattering	
Cerebrospinal meningitis	1
Chicken pox	145
Diphtheria	43

WISCONSIN—continued

Scattering—Continued	Cases
German measles	3
Influenza	25
Measles	170
Mumps	23
Pneumonia	13
Poliomyelitis	4
Scarlet fever	85
Smallpox	15
Trachoma	1
Tuberculosis	26
Typhoid fever	9
Whooping cough	111

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended October 23, 1926, 37 States reported 2,119 cases of diphtheria. For the week ended October 24, 1925, the same States reported 1,938 cases of this disease. Ninety-seven cities, situated in all parts of the country and having an aggregate population of more than 29,600,000, reported 1,160 cases of diphtheria for the week ended October 23, 1926. Last year for the corresponding week they reported 902 cases. The estimated expectancy for these cities was 1,172 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-five States reported 1,825 cases of measles for the week ended October 23, 1926, and 999 cases of this disease for the week ended October 24, 1925. Ninety-seven cities reported 275 cases of measles for the week this year, and 517 cases last year.

Poliomyelitis.—The health officers of 37 States reported 70 cases of poliomyelitis for the week ended October 23, 1926. The same States reported 172 cases for the week ended October 24, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-seven States—this year, 2,121 cases; last year, 1,881 cases; 97 cities—this year, 867 cases; last year, 690 cases; estimated expectancy, 682 cases.

Smallpox.—For the week ended October 23, 1926, 37 States reported 220 cases of smallpox. Last year for the corresponding week they reported 128 cases. Ninety-seven cities reported smallpox for the week as follows: 1926, 18 cases; 1925, 40 cases; estimated expectancy, 29 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—Eight hundred and fifty-six cases of typhoid fever were reported for the week ended October 23, 1926, by 36 States. For the corresponding week of 1925 the same States reported 907 cases of this disease. Ninety-seven cities reported 146 cases of typhoid fever for the week this year and 185 cases for the corresponding week last year. The estimated expectancy for these cities was 151 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 92 cities, with a population of more than 29,200,000, as follows: 1926, 515 deaths; 1925, 528 deaths.

City reports for week ended October 23, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	11	1	0	0	0	2	0	0
New Hampshire									
Concord	22,546	0	0	1	0	0	0	1	0
Manchester	83,097	0	4	0	0	0	0	0	1
Vermont									
Barre	10,008	1	0	0	0	0	0	0	1
Massachusetts									
Boston	779,620	19	53	14	6	1	6	7	14
Fall River	128,993	0	4	1	1	1	3	7	0
Springfield	142,065	5	4	0	0	0	0	2	0
Worcester	190,757	8	7	6	1	0	0	1	7
Rhode Island:									
Pawtucket	69,760	0	2	1	0	0	0	0	1
Providence	267,918	0	6	5	0	0	0	0	4
Connecticut									
Bridgeport	(1)	1	10	4	0	0	0	1	1
Hartford	160,197	3	8	4	0	1	0	0	5
New Haven	178,927	6	3	0	0	0	0	0	2
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	22	21	12	--------	1	0	0	14
New York	5,873,356	69	155	139	49	12	5	35	114
Rochester	316,786	3	13	4	--------	0	0	0	1
Syracuse	182,003	0	10	0	--------	0	0	1	4
New Jersey									
Camden	128,642	2	7	14	0	0	0	1	5
Newark	452,513	21	14	7	3	0	5	2	7
Trenton	132,020	0	5	1	0	0	0	0	2
Pennsylvania									
Philadelphia	1,979,364	49	68	47	--------	2	4	4	42
Pittsburgh	631,563	29	29	19	--------	1	10	0	18
Reading	112,707	6	4	2	--------	0	0	1	1
Scranton	142,266	0	4	4	--------	0	0	1	0
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	3	19	10	0	3	1	4	3
Cleveland	936,485	13	47	105	0	0	11	2	8
Columbus	279,836	2	7	5	0	0	0	0	2
Toledo	287,380	27	14	5	0	0	0	0	3
Indiana:									
Fort Wayne	97,846	0	3	6	0	0	0	0	4
Indianapolis	358,819	22	14	45	0	1	2	0	10
South Bend	80,091	19	2	4	0	0	6	0	0
Terre Haute	71,071	2	3	1	0	0	0	0	1

[1] No estimate made.

City reports for week ended October 23, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Illinois									
Chicago	2,995,239	54	137	54	5	3	34	11	31
Peoria	81,564	6	2	0	0	0	32	2	5
Springfield	63,923	1	2	1	0	0	5	0	0
Michigan									
Detroit	1,245,824	55	62	123	1	0	2	4	18
Flint	130,316	11	13	6	0	0	1	0	1
Grand Rapids	153,698	0	8	3	0	0	0	0	1
Wisconsin									
Kenosha	50,891	6	2	0	0	0	4	1	2
Madison	46,385	0	1	1	0	0	0	0	0
Milwaukee	509,192	...	27	...	...	...	...	...	...
Racine	67,707	10	2	2	0	0	4	3	0
Superior	39,671	1	0	0	0	0	0	0	1
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	...	4	...	...	0	...	...	2
Minneapolis	425,435	46	31	35	0	0	2	1	4
St. Paul	246,001	20	20	7	0	1	9	0	6
Iowa									
Davenport	52,469	0	2	1	0	...	6	0	...
Sioux City	76,411	5	2	2	0	...	0	0	...
Waterloo	36,771	6	0	0	0	...	0	0	...
Missouri									
Kansas City	367,481	13	14	7	0	0	0	1	5
St. Joseph	78,342	0	4	1	0	0	0	0	3
St. Louis	821,543	3	50	59	0	0	1	2	...
North Dakota									
Fargo	26,403	6	1	0	0	0	0	4	0
Grand Forks	14,811	0	0	0	0	...	26	0	...
South Dakota									
Aberdeen	15,036	0	0	1	0	...	0	0	...
Sioux Falls	30,127	0	0	0	0	0	0	0	0
Nebraska									
Lincoln	60,941	0	2	0	0	0	0	0	2
Omaha	211,768	0	12	2	0	0	3	1	3
Kansas									
Topeka	55,411	2	2	4	0	0	0	0	0
Wichita	88,367	0	4	0	0	0	0	1	0
SOUTH ATLANTIC									
Delaware:									
Wilmington	122,049	1	3	1	0	0	0	0	3
Maryland:									
Baltimore	796,296	34	27	29	1	0	5	1	10
Cumberland	33,741	0	0	0	0	0	0	0	0
Frederick	12,035	0	1	1	0	0	0	0	0
District of Columbia:									
Washington	497,906	5	16	18	0	0	0	0	13
Virginia:									
Lynchburg	30,395	3	2	10	0	0	2	0	1
Norfolk	(1)	3	3	5	0	0	0	0	1
Richmond	186,403	0	21	38	0	1	3	0	4
Roanoke	58,208	0	5	7	0	1	0	0	0
West Virginia:									
Charleston	49,019	0	3	4	1	2	1	1	1
Huntington	63,485	0	4	6	0	...	0	0	...
Wheeling	56,208	5	3	0	0	0	0	0	1
North Carolina:									
Raleigh	30,371	1	4	4	0	0	0	0	0
Wilmington	37,061	1	1	0	0	0	0	0	2
Winston-Salem	69,031	0	4	6	0	0	0	0	2
South Carolina:									
Charleston	73,125	0	1	0	18	0	0	0	2
Columbia	41,225	1	3	4	0	0	0	0	0
Greenville	27,311	0	1	6	0	0	0	0	0

[1] No estimate made.

City reports for week ended October 23, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—con									
Georgia:									
Atlanta	(1)	0	11	23	9	0	1	0	9
Brunswick	16,809	0	0	0	0	0	0	1	1
Savannah	93,134	2	4	0	5	0	1	0	3
Florida:									
Miami	69,754	0	--------	7	1	0	1	0	1
St Petersburg	26,847	--------	0	--------	--------	0	--------	--------	1
Tampa	94,743	0	1	5	0	0	1	0	1
EAST SOUTH CENTRAL									
Kentucky:									
Covington	58,309	0	3	15	0	0	0	0	3
Louisville	305,935	0	12	3	0	0	0	0	5
Tennessee:									
Memphis	174,533	0	14	10	0	1	1	0	1
Nashville	136,220	0	4	19	0	0	0	0	3
Alabama:									
Birmingham	205,670	1	7	17	5	0	3	0	7
Mobile	65,955	0	2	3	0	1	0	0	0
Montgomery	46,481	0	3	10	5	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	31,643	0	1	6	0	--------	1	1	--------
Little Rock	74,216	0	3	2	0	--------	0	0	--------
Louisiana:									
New Orleans	414,493	0	11	10	1	1	0	0	6
Shreveport	57,857	1	1	3	0	0	0	0	1
Oklahoma:									
Oklahoma City	(1)	0	4	3	8	0	0	0	6
Texas:									
Dallas	194,450	0	11	34	3	2	0	1	1
Galveston	48,375	0	0	0	0	0	0	0	1
Houston	164,954	0	4	7	0	0	0	0	0
San Antonio	198,069	0	1	3	0	0	0	0	3
MOUNTAIN									
Montana:									
Billings	17,971	3	1	0	0	0	2	0	0
Great Falls	29,883	25	1	1	0	0	0	0	0
Helena	12,037	0	0	0	0	0	0	0	1
Missoula	12,668	1	0	0	0	0	0	0	0
Idaho:									
Boise	23,042	0	0	1	0	0	0	0	0
Colorado:									
Denver	280,911	7	15	21	--------	3	5	1	8
Pueblo	43,787	4	6	1	0	0	0	0	1
New Mexico:									
Albuquerque	21,000	0	1	0	0	0	1	1	1
Arizona:									
Phoenix	38,669	0	0	0	0	0	0	0	1
Utah:									
Salt Lake City	130,948	24	4	4	0	0	30	1	4
Nevada:									
Reno	12,665	0	0	0	0	0	0		0
PACIFIC									
Washington:									
Seattle	(1)	36	7	10	0	--------	1	16	--------
Spokane	108,897	23	5	0	0	--------	5	0	--------
Tacoma	104,455	4	3	9	0	0	0	0	2
Oregon:									
Portland	282,383	1	10	14	0	0	1	1	6
California:									
Los Angeles	(1)	10	38	38	4	0	4	15	19
Sacramento	72,260	2	2	1	0	0	9	5	2
San Francisco	557,530	16	19	13	0	0	84	20	5

[1] No estimate made

City reports for week ended October 23, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	1	1	0	0	0	1	1	1	0	12	9
New Hampshire											
Concord	0	2	0	0	0	1	0	0	0	0	7
Manchester	1	3	0	0	0	0	0	0	0	0	12
Vermont.											
Barre	1	0	0	0	0	0	0	0	0	0	2
Massachusetts											
Boston	28	46	0	0	0	16	4	5	1	13	206
Fall River	1	3	0	0	0	2	1	0	0	7	19
Springfield	6	4	0	0	0	2	0	0	0	3	26
Worcester	7	12	0	0	0	0	0	0	0	8	46
Rhode Island.											
Pawtucket	0	0	0	0	0	1	0	0	0	0	11
Providence	4	4	0	0	0	2	0	0	0	8	51
Connecticut											
Bridgeport	4	3	0	0	0	5	1	0	0	0	28
Hartford	4	5	0	0	0	0	1	0	0	2	34
New Haven	5	2	0	0	0	3	2	2	0	0	33
MIDDLE ATLANTIC											
New York											
Buffalo	14	0	0	0	0	11	2	3	1	4	135
New York	62	51	0	0	0	[1] 82	25	22	5	89	1,253
Rochester	6	4	0	0	0	4	1	0	0	9	48
Syracuse	7	0	0	0	0	0	1	0	0	7	42
New Jersey											
Camden	2	2	0	0	0	0	1	1	0	0	26
Newark	9	7	0	0	0	6	3	2	0	13	91
Trenton	1	0	0	0	0	3	1	2	1	3	27
Pennsylvania											
Philadelphia	46	27	0	0	0	39	11	10	0	26	473
Pittsburgh	31	12	0	0	0	6	3	0	0	9	147
Reading	1	0	0	0	0	1	1	0	0	8	18
Scranton	2	2	0	0	0	0	0	0	0	1	22
EAST NORTH CENTRAL											
Ohio											
Cincinnati	10	14	0	0	0	6	2	3	1	8	122
Cleveland	21	17	0	0	0	11	3	3	1	18	175
Columbus	8	8	0	2	0	3	2	0	0	1	73
Toledo	9	23	0	0	0	1	2	2	1	23	54
Indiana											
Fort Wayne	1	0	0	0	0	0	1	2	1	0	36
Indianapolis	7	23	2	0	0	7	1	0	1	17	88
South Bend	2	0	1	0	0	0	0	0	0	2	10
Terre Haute	2	3	0	0	0	1	0	0	0	0	19
Illinois											
Chicago	83	62	1	0	0	52	8	5	1	47	601
Peoria	9	3	0	0	0	0	0	0	0	0	22
Springfield	2	3	0	0	0	1	1	0	0	4	18
Michigan											
Detroit	52	53	2	3	0	18	5	3	1	30	271
Flint	7	22	0	0	0	3	1	1	0	3	18
Grand Rapids	7	5	1	0	0	0	1	0	0	0	32
Wisconsin.											
Kenosha	2	4	0	0	0	1	0	0	0	6	14
Madison	1	5	0	0	0	0	0	1	0	2	5
Milwaukee	19	------	2	------	------	------	1	------	------	------	------
Racine	4	2	1	0	0	0	0	0	0	1	9
Superior	2	1	0	0	0	1	0	0	0	0	5

[1] Pulmonary tuberculosis only.

City reports for week ended October 23, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL											
Minnesota											
Duluth	6	------	0	------	0	2	1	------	0	------	29
Minneapolis	31	79	1	0	0	2	2	2	0	0	80
St Paul	13	31	3	0	0	3	1	0	0	4	67
Iowa											
Davenport	1	0	1	0	------	------	0	0	------	1	------
Sioux City	2	4	1	0	------	------	0	0	------	0	------
Waterloo	2	1	0	0	------	------	1	0	------	1	------
Missouri											
Kansas City	10	5	0	0	0	2	2	3	1	9	67
St. Joseph	3	1	0	0	0	0	1	0	0	0	22
St Louis	30	29	0	0	0	8	4	6	0	12	198
North Dakota											
Fargo	1	7	0	0	0	0	0	0	0	0	11
Grand Forks	0	4	0	0	------	------	0	0	------	0	------
South Dakota											
Aberdeen	1	11	1	0	------	------	1	0	------	0	------
Sioux Falls	1	2	1	0	0	0	0	0	0	0	------
Nebraska											
Lincoln	1	4	0	0	0	0	0	0	0	4	12
Omaha	4	12	1	0	0	1	1	0	0	1	43
Kansas											
Topeka	3	6	0	0	0	0	0	0	0	0	11
Wichita	2	4	0	0	0	1	0	0	0	0	29
SOUTH ATLANTIC											
Delaware											
Wilmington	3	12	0	0	0	1	1	1	0	0	22
Maryland											
Baltimore	11	8	0	0	0	13	7	6	0	37	196
Cumberland	0	0	0	0	0	0	1	1	0	0	10
Frederick	0	0	0	0	0	0	0	0	0	0	2
District of Col.											
Washington	12	15	0	0	0	8	3	0	1	7	118
Virginia											
Lynchburg	1	4	0	0	0	0	0	0	0	1	13
Norfolk	1	8	0	0	0	4	1	0	0	0	------
Richmond	7	9	0	0	0	2	1	2	0	4	46
Roanoke	2	6	0	0	0	1	1	0	0	0	17
West Virginia											
Charleston	1	5	0	0	0	1	1	0	0	2	13
Huntington	2	9	0	0	------	------	0	0	------	0	------
Wheeling	4	0	0	0	0	0	1	5	0	0	13
North Carolina											
Raleigh	2	2	0	0	0	1	0	0	0	7	8
Wilmington	1	0	0	1	0	0	0	0	0	4	9
Winston-Salem	2	3	0	0	0	1	1	4	2	0	20
South Carolina											
Charleston	1	4	0	0	0	1	1	2	1	0	21
Columbia	1	0	1	0	0	0	0	2	0	0	------
Greenville	0	3	0	0	0	0	1	4	0	0	9
Georgia											
Atlanta	6	7	0	3	0	5	1	14	3	2	77
Brunswick	0	0	0	0	0	1	0	0	0	0	4
Savannah	1	0	0	0	0	0	1	0	0	0	38
Florida											
Miami	------	0	------	0	0	3	------	1	0	1	34
St. Petersburg	0	------	0	------	0	0	0	------	0	------	13
Tampa	0	1	0	1	0	2	0	0	0	0	25

City reports for week ended October 23, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
EAST SOUTH CENTRAL											
Kentucky:											
Covington	2	4	0	0	0	1	0	0	0	0	13
Louisville	4	6	0	0	0	8	3	3	0	1	98
Tennessee:											
Memphis	4	8	1	0	0	5	3	9	1	18	44
Nashville	4	7	1	0	0	3	3	5	1	11	45
Alabama:											
Birmingham	5	17	0	2	0	9	3	2	1	4	78
Mobile	1	1	0	0	0	0	0	0	0	0	22
Montgomery	1	0	0	0	0	0	0	0	0	0	5
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	0	0	0	-------	-------	0	0	-------	1	-------
Little Rock	2	2	0	0	-------	-------	1	2	-------	0	-------
Louisiana:											
New Orleans	4	5	0	0	0	13	4	0	0	0	126
Shreveport	0	1	0	0	0	1	1	0	1	2	32
Oklahoma:											
Oklahoma City	2	2	0	0	0	1	1	0	0	0	28
Texas:											
Dallas	4	11	0	0	0	2	1	3	2	0	49
Galveston	0	0	0	0	0	0	0	0	0	0	12
Houston	1	2	1	0	0	2	1	0	1	0	46
San Antonio	0	1	0	0	0	7	0	0	0	0	43
MOUNTAIN											
Montana:											
Billings	0	1	0	0	0	0	0	0	0	1	1
Great Falls	1	2	1	0	0	0	1	0	0	1	8
Helena	1	0	0	0	0	0	0	3	0	0	4
Missoula	0	12	0	0	0	0	0	0	0	0	6
Idaho:											
Boise	1	1	0	0	0	0	0	0	0	0	4
Colorado:											
Denver	6	26	2	0	0	10	2	0	0	1	77
Pueblo	1	1	0	0	0	0	0	0	1	4	7
New Mexico:											
Albuquerque	1	1	0	0	0	1	1	0	0	0	15
Arizona:											
Phoenix	2	0	0	0	0	9	1	0	0	0	24
Utah:											
Salt Lake City	2	6	0	0	0	2	2	0	0	6	25
Nevada:											
Reno	0	0	0	0	0	0	0	0	0	0	2
PACIFIC											
Washington:											
Seattle	7	16	1	0	-------	-------	1	2	-------	1	-------
Spokane	5	16	1	0	-------	-------	1	1	-------	0	-------
Tacoma	2	4	1	5	0	1	0	1	0	3	21
Oregon:											
Portland	6	13	3	0	0	1	2	2	0	1	53
California:											
Los Angeles	12	26	3	1	0	16	4	1	0	2	196
Sacramento	1	2	1	0	0	2	1	0	0	0	23
San Francisco	7	23	1	0	0	7	2	0	0	7	113

City reports for week ended October 23, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts									
Boston	0	0	1	1	1	0	1	1	0
Springfield	0	0	1	0	0	0	1	0	0
Rhode Island									
Providence	0	0	0	0	0	0	0	1	0
MIDDLE ATLANTIC									
New York									
Buffalo	0	0	0	0	0	0	0	1	0
New York	4	4	4	1	0	0	11	0	0
Pennsylvania [1]									
Philadelphia	1	1	0	0	0	0	1	1	0
EAST NORTH CENTRAL									
Illinois									
Chicago	0	0	0	0	0	0	4	4	0
Michigan									
Detroit	1	3	2	0	0	0	1	1	1
Grand Rapids	0	0	0	0	0	0	0	1	1
WEST NORTH CENTRAL									
Missouri									
St Louis	2	0	0	0	0	0	0	1	0
SOUTH ATLANTIC									
Maryland									
Baltimore	1	1	0	0	0	0	1	2	0
Virginia									
Richmond	1	0	0	0	0	0	0	0	0
Roanoke	0	0	0	0	0	1	0	0	0
South Carolina [2]									
Greenville	0	0	0	0	0	1	0	0	0
Georgia									
Atlanta	0	0	0	0	0	1	0	0	0
Florida									
Miami	0	0	0	0	1	0	--------	0	0
Tampa	0	0	0	0	0	1	0	0	0
EAST SOUTH CENTRAL									
Kentucky									
Covington	1	0	0	0	0	0	0	0	0
Tennessee									
Memphis	0	0	0	0	1	0	0	0	0
Alabama									
Birmingham	0	0	0	0	0	1	0	1	0
Mobile	0	0	0	1	0	0	0	0	0
PACIFIC									
Washington									
Spokane	1	0	0	0	0	0	[illegible]	0	0
California									
San Francisco	0	0	0	0	0	0	0	1	0

[1] Rabies, (human) 1 case and 1 death at Scranton, Pa. [2] Dengue, 3 cases at Charleston, S. C.

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended October 23, 1926, compared with those for a like period ended October 24, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 95 cities reporting deaths had more

than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926 The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, September 19 to October 23, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926	Oct. 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct. 23, 1926
101 cities	[2] 97	107	[3] 115	128	134	159	150	165	[4] 163	[5] 204
New England	81	73	74	66	96	66	120	85	[6] 94	85
Middle Atlantic	81	70	84	81	114	118	129	100	128	122
East North Central	101	128	[3] 130	136	153	188	166	219	180	[7] 268
West North Central	153	127	192	143	198	177	233	200	256	[8] 246
South Atlantic	109	128	207	163	179	216	209	218	[9] 252	302
East South Central	58	135	63	270	89	254	89	270	100	400
West South Central	75	69	62	211	79	176	88	219	101	280
Mountain	[2] 189	137	129	291	194	173	157	164	361	255
Pacific	102	213	102	175	102	200	105	175	135	191

MEASLES CASE RATES

101 cities	[2] 35	37	[3] 39	36	53	31	67	43	[4] 91	[5] 48
New England	177	38	242	21	371	33	431	26	[6] 578	26
Middle Atlantic	33	9	35	10	47	11	65	9	87	12
East North Central	22	22	[3] 24	24	21	29	24	36	45	[7] 48
West North Central	6	28	6	10	6	26	10	44	10	[8] 32
South Atlantic	29	11	23	13	15	15	52	21	[9] 37	26
East South Central	11	10	11	5	11	5	5	0	37	21
West South Central	0	0	0	0	0	0	0	13	13	4
Mountain	[2] 28	118	9	109	37	109	18	237	28	337
Pacific	19	310	3	329	11	181	28	291	11	278

SCARLET FEVER CASE RATES

101 cities	[2] 63	79	[3] 86	100	92	111	121	130	[4] 127	[5] 152
New England	46	71	86	104	105	144	127	144	[6] 125	194
Middle Atlantic	48	50	62	51	65	57	75	62	96	51
East North Central	65	80	[3] 96	99	109	121	143	132	135	[7] 159
West North Central	135	153	176	197	119	215	256	318	284	[8] 377
South Atlantic	61	70	67	111	92	100	129	126	[9] 126	163
East South Central	74	83	74	99	121	145	112	115	121	223
West South Central	13	52	48	69	62	69	73	86	40	95
Mountain	[2] 85	118	176	319	148	300	46	261	111	116
Pacific	77	110	88	175	102	159	135	205	127	235

SMALLPOX CASE RATES

101 cities	[2] 5	3	[3] 2	1	5	3	8	4	[4] 7	[5] 3
New England	0	0	0	0	0	0	0	0	[6] 7	0
Middle Atlantic	0	1	0	0	0	0	0	0	0	0
East North Central	2	1	[3] 0	0	1	1	8	3	4	[7] 1
West North Central	2	2	2	2	10	2	0	6	4	[8] 0
South Atlantic	6	6	0	4	6	0	6	4	[9] 0	9
East South Central	32	0	0	0	16	10	42	0	5	10
West South Central	0	13	0	0	0	4	0	4	0	0
Mountain	[2] 38	0	9	9	9	9	28	9	9	0
Pacific	39	19	25	5	44	19	55	32	75	16

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported Populations used are estimated as of July 1, 1925 and 1926, respectively
[2] Helena, Mont., not included
[3] Superior, Wis., not included
[4] Barre, Vt., and Winston-Salem, N. C., not included
[5] Milwaukee, Wis., and Duluth, Minn., not included.
[6] Barre, Vt., not included.
[7] Milwaukee, Wis., not included.
[8] Duluth, Minn., not included.
[9] Winston-Salem, N. C., not included.

Summary of weekly reports from cities, September 19 to October 23, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926
101 cities	[2] 44	44	[3] 39	42	36	33	35	32	[4] 32	[5] 26
New England	22	9	46	17	26	17	24	57	[6] 14	19
Middle Atlantic	34	45	32	28	31	27	28	26	25	20
East North Central	29	26	[3] 20	33	21	23	31	15	9	[7] 13
West North Central	16	26	35	40	33	22	20	14	33	[8] 23
South Atlantic	88	92	50	115	52	77	65	66	[9] 73	77
East South Central	200	166	131	130	163	145	121	140	147	99
West South Central	97	77	92	47	57	22	44	26	79	22
Mountain	[2] 94	36	111	82	120	64	46	46	65	27
Pacific	22	22	28	19	8	22	19	16	30	13

INFLUENZA DEATH RATES

	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926
95 cities	[2] 3	6	[3] 5	6	3	4	6	6	[4] 8	[7] 7
New England	0	5	0	2	0	0	0	5	[6] 2	7
Middle Atlantic	3	3	3	2	3	3	5	4	8	8
East North Central	4	3	[3] 6	5	3	2	8	2	9	[7] 5
West North Central	4	8	6	0	4	6	6	11	6	2
South Atlantic	2	9	4	9	2	6	2	8	[9] 2	8
East South Central	0	10	16	10	0	5	16	16	5	10
West South Central	0	24	19	38	15	14	10	14	19	14
Mountain	[2] 9	9	0	18	9	18	0	27	37	27
Pacific	4	7	0	7	0	0	11	11	4	0

PNEUMONIA DEATH RATES

	Sept 26, 1925	Sept 25, 1926	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926
95 cities	[2] 54	65	[3] 61	69	63	64	90	77	[4] 88	[7] 86
New England	53	76	31	87	58	33	93	76	[6] 87	83
Middle Atlantic	66	70	68	71	63	76	94	88	89	104
East North Central	39	45	[3] 44	59	61	54	89	63	79	[7] 58
West North Central	26	55	36	70	45	63	58	53	60	49
South Atlantic	86	79	81	66	71	60	121	88	[9] 116	113
East South Central	42	88	100	109	110	83	95	52	121	90
West South Central	48	99	63	71	63	94	53	104	111	57
Mountain	[2] 76	55	139	155	92	55	120	118	111	127
Pacific	51	78	87	28	51	53	80	82	76	99

[2] Helena, Mont, not included
[3] Superior, Wis, not included
[4] Barre, Vt, and Winston-Salem, N C, not included
[5] Milwaukee, Wis, and Duluth, Minn, not included.
[6] Barre, Vt, not included
[7] Milwaukee, Wis, not included.
[8] Duluth, Minn, not included
[9] Winston-Salem, N C, not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,331	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,588,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Reports for week ended October 16, 1926.—The following report for the week ended October 16, 1926, was transmitted by the far eastern bureau of the secretariat of the health section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Small-pox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Mauritius, Port Louis	2	2	0	0	0	0
Union of South Africa:						
Durban	0	0	0	0	10	----
British India:						
Calcutta	----	0	----	8	3	3
Bombay	----	0	----	1	4	3
Madras	----	0	----	0	5	1
Rangoon	----	1	----	0	0	0

Maritime towns	Plague		Cholera		Small-pox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Ceylon: Colombo	0	0	0	0	1	0
Dutch East Indies.						
Belawan Deli	0	0	0	0	0	1
Siam Bangkok	0	0	0	1	2	2
China:						
Amoy	0	0	13	----	0	0
Shanghai	0	0	3	1	0	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia.—Aden, Jeddah, Kamaran, Perim

Iraq.—Basrah.

Persia.—Mohammerah, Bender-Abbas, Bushire.

British India.—Karachi, Chittagong, Cochin, Vizagapatam, Tuticorin, Negapatam.

Federated Malay States.—Port Swettenham.

Straits Settlements.—Singapore, Penang.

Dutch East Indies.—Batavia, Cheribon, Surabaya, Samarang, Sabang, Makassar, Banjermasin, Tarakan, Padang, Balik-Papan, Samarinda, Pontianak.

Sarawak.—Kuching.

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.

Portuguese Timor.—Dilly.

French Indo-China.—Saigon and Cholon, Turane, Haiphong.

China.—Hongkong.

Formosa.—Keelung.

Japan.—Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Shimonoseki.

Korea.—Chemulpo, Fusan.

Manchuria.—Mukden, Changchun, Harbin, Antung.

Kwantung.—Port Arthur, Dairen.

U. S. S. R.—Vladivostok.

AUSTRALASIA AND OCEANIA

Australia—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island
New Guinea—Port Moresby
New Britain Mandated Territory—Rabaul
New Zealand—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
New Caledonia—Noumea.
Fiji.—Suva.
Hawaii—Honolulu
Society Islands—Papeete

AFRICA

Egypt—Alexandria, Port Said, Suez
Anglo-Egyptian Sudan—Port Sudan, Suakin.
Eritrea—Massaua
French Somaliland—Jibuti
British Somaliland—Berbera
Italian Somaliland.—Mogadiscio.
Kenya.—Mombasa
Zanzibar—Zanzibar
Tanganyika—Dar-es-Salaam
Seychelles—Victoria.
Portuguese East Africa—Mozambique, Beira, Lorenco Marques
Union of South Africa—East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

Dutch East Indies—Palembang, Menado
Philippine Islands—Manila, Iloilo, Jolo, Cebu, Zamboanga
Madagascar—Tamatave, Majunga.

CANADA

Communicable diseases—Week ended October 23, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in six Provinces of Canada for the week ended October 23, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Total
Cerebrospinal meningitis			1				1
Influenza	14				1		15
Poliomyelitis		1		1			2
Smallpox				2		2	4
Typhoid fever			8	15	1	1	25

EGYPT

Plague—Western Desert Province—October 11–12, 1926.—Seven cases of plague were reported on October 11 and 12, 1926, in the vicinity of Sidi Barani, Western Desert Province, Egypt. Of these, four were bubonic in type, and three, with fatal termination, were septicemic. Plague was reported at Sidi Barani, September 3–9, 1926, with 12 cases.[1]

[1] Public Health Reports, Oct. 22, 1926, p. 2448

FINLAND

Communicable diseases—July, 1926.—During the month of July, 1926, communicable diseases were reported in the Republic of Finland, as follows.

Disease	Cases	Disease	Cases
Diphtheria	40	Paratyphoid fever	98
Dysentery	1	Scarlet fever	62
Lethargic encephalitis	1	Typhoid fever	50

Population, 3,469,402

HAWAII TERRITORY

Plague—Honokaa Village—October 6, 1926.—A fatal case of plague was reported October 6, 1926, at Honokaa Village, Island of Hawaii.

MALTA

Communicable diseases—September, 1926.—During the month of September 1926, communicable diseases were reported in the Island of Malta as follows:

Disease	Cases	Disease	Cases
Broncho-pneumonia	8	Penumonia	3
Diphtheria	8	Puerperal infection	3
Erysipelas	5	Scarlet fever	1
Influenza	2	Trachoma	104
Malaria	5	Tuberculosis	22
Malta fever	78	Typhoid fever	50
Measles	12	Whooping cough	11

Population, civil, estimated, 223,088.

PERU

Plague—September, 1926.—During the month of September, 1926, plague was reported in Peru with 45 cases and 36 deaths, occurring in four Departments as compared with 21 cases with 9 deaths occurring in two Provinces during the previous month.[1] The occurrence was reported by departments as follows: *Junin*—Cases, 21; deaths, 20, occurring in one province and one locality. *Lambayeque*—one case. *Libertad*—Cases, 3; deaths, 1. *Lima*—Cases, 20; deaths, 15, of which 1 case with 1 death occurred at the city of Lima and 3 cases with 2 deaths in the vicinity on country estates. In the Departments of Ancash and Cajamarca plague was stated to have been present during the period under report.

[1] Public Health Reports, Oct. 15, 1926, p. 2370.

SPAIN

Mortality from communicable diseases—Madrid—September, 1926.—During the month of September, 1926, mortality from communicable diseases was reported as follows: Diphtheria, deaths, 6, measles, 3; scarlet fever, 13; tuberculosis, all forms, 132; typhoid fever, 15. The total number of deaths from all causes during the period under report was 998. Population, estimated, 766,552.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended November 12, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Amoy	Sept 19-Oct 2	65		
Swatow	Sept 19-25			Sporadic
India				Aug 29-Sept 4, 1926 Cases, 2,367, deaths, 1,514
Siam				Sept 12-18, 1926 Cases, 17, deaths, 12 Apr. 1-Sept 18, 1926 Cases, 7,604, deaths, 4,988
Bangkok	Sept. 12-18	2	1	District

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Oran	Oct. 1-10	3	2	
Egypt				
Sidi Barani	Oct 11-12	7	3	In Western Desert Province
Greece.				
Athens	Sept 1-30	11	3	Including Piræus
Hawaii Territory				
Honokaa Village	Oct. 6	1	1	
India				Aug. 29-Sept 4, 1926, Cases, 745, deaths, 406
Madras Presidency	Sept 5-11	70	32	
Rangoon	Sept 19-25	6	6	
Peru				September, 1926 Cases, 45, deaths, 36.
Departments—				
Ancash	Sept 1-30			Present In one Province and locality
Cajamarca	do			Do
Junin	do	21	20	
Lambayeque	do	1		
Libertad	do	3	1	
Lima	do	20	15	
Canete Province	do	13	9	
Canta Province	do	1		
Lima Province	do	6	6	In Lima City, one case, one death, country districts, cases, 3, deaths, 2

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Arabia				
Aden	Oct 3-9	1		Imported
Brazil				
Bahia	Sept. 9-18	5	2	
Canada:				
New Brunswick—				
Northumberland County.	Oct. 11-23	1		
Ontario	Oct 17-23	2		
Saskatchewan.	do	2		

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended November 12, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China				
Chungking	Sept 12-18			Present
Swatow	Sept 19-25			Sporadic
Egypt				
Cairo	Apr 1-May 13	23	4	
Great Britain				
England and Wales				Sept 26-Oct 2, 1926 Cases, 96
India				Aug 29-Sept 4, 1926 Cases, 1,782, deaths, 563
Karachi	Sept 26-Oct 2	1		
Madras	Sept 26-Oct 2	2	3	
Java				
Batavia	Sept 12-18	4		Province
Surabaya	Aug 29-Sept 4	24	3	
Mexico				
San Luis Potosi	Oct 18-23		1	
Persia				
Teheran	June 23-July 23		3	
Siam				Sept 12-18, 1926 Cases, 12, deaths, 4, Apr 1-Sept. 18, 1926: Cases, 576, deaths, 226.
Bangkok	Sept 12-18	8	4	District

TYPHUS FEVER

China:				
Antung	Sept 27-Oct. 10	6		
Egypt:				
Cairo	Apr. 1-May 13	15	10	
Greece				
Athens	Sept 1-30		17	Including Piræus.

Reports Received from June 26 to November 5, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926 Cases, 31; deaths, 29
China				
Amoy	Aug 8-Sept 18	170		Stated to be present in epidemic form
Canton	June 1-30	38	14	
Do	July 15-31	54	28	
Foochow	Aug 15-Sept 18			Present
Kulangsu	Sept 12-18		2	
Manchuria—				
Dairen	Aug 23-29	1	1	
Nanking	July 25-Aug 7			Do
Shanghai	Reported July 20	35	8	
Do	July 25-Sept 18	36	385	Cases, foreign, deaths, native and foreign
Swatow	July 11-Sept 18	36	63	
Tsingtao	July 11-Aug 30	4	4	Japanese settlements, 10 deaths; Chinese, 30 to 40 deaths daily, estimated
Chosen				
North Heian Province	Sept 3-16	70	30	Deaths estimated.
Shingishu	Sept 13	19		Including places in vicinity
French Settlements in India				Mar 7-June 26, 1926 Cases, 31; deaths, 30.
India				Apr 25-June 26, 1926 Cases, 18,526, deaths, 11,531. June 27-Aug 28, 1926: Cases, 18,624, deaths, 11,877.
Bombay	May 30-June 5	1	1	
Do	July 18-Aug. 28	3	3	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 5, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
India—Continued				
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-Sept 18	295	265	
Madras	May 16-June 5	2	1	
Do	Aug 1-Sept 25	7	6	
Rangoon	May 9-June 26	67	44	
Do	June 27-Sept 4	31	29	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug 14	31	17	
Japan				To Sept 10, 1926 Cases, 35.
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Taihoku	Sept 1-10	2		
Wakayama	To Sept 10	2		
Philippine Islands				
Manila	May 18-24	2	2	
Do	June 27-Sept 11	13	3	
Provinces—				
Albay	Apr 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb 21-Mar 6	3	3	
Pampanga	July 25-31	1	1	
Rizal	July 18-24	1		
Romblon	Dec 14 31	42	43	
Do	Jan 2-Mar 27	41	35	
Siam				Apr 1-Sept 11, 1926 Cases, 7,587; deaths, 4,976
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-Sept 11	89	32	
Straits Settlements				
Singapore	July 4-17	2	1	
On vessel				
Steamship Macedonia	Aug 5	7		At Yokohama, Japan Vessel Sailed from Singapore, July 18, 1926

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria.				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported
Do	July 1-20	1		
Do	Sept 23	1		
Bona	Aug. 14	1		
Oran	Sept 21-30	6	1	
Philippeville	Sept 7	1		
Azores.				
Fayal Island—				
Horta	Aug 2-29	2	2	
St Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	
Brazil				
Paranagua	Oct 8			Present
British East Africa				
Kisumu	May 16-22	1	1	
Do	Aug 17-Sept 11	3	2	
Uganda	Mar 1-June 30	732	574	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 5, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
China:				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug 7	28		
Foochow	June 6-July 31			Several cases Not epidemic.
Nanking	May 9-Sept 18			Prevalent
Swatow	July 25-31	14		
Ecuador				January-June, 1926 Cases, 385, deaths, 154
Chimborazo	January-June	9	2	Rats taken, 766
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1-Sept 30	16	3	Rats taken, 62,544; found infected, 89
Leon	January-June	43	19	Localities, 2.
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1,542
Egypt				Jan. 1-Sept 9, 1926, Cases, 128
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
Western Desert	Sept. 30	12		At Sidi Barani.
France				
Marseille	July 8	1	1	Reported July 24
St Denis	Reported Aug 2	1		Vicinity of Paris.
St Ouen	Aug. 14	2		Suburb of Paris
Great Britain				
Liverpool	Aug 29-Sept 4	2	1	
Greece				
Athens	Apr 1-May 31	16	4	Including Piræus
Do	Aug 1-31	9	2	Do
Patras	May 27-June 12	4	1	
Do	July 25-Oct 2	8	4	
Zante	May 17	1		
Hawaii Territory				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Paauhau	July 18-24			Plague-infected rat trapped
India				Apr 25-June 16, 1926. Cases, 53,001; deaths, 41,576. June 27-Aug 28, 1926 Cases, 2,726, deaths, 1,632
Bombay	May 2-June 26	16	15	
Do	July 18-Sept 18	9	8	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	162	93	
Do	July 4-Sept 4	529	259	
Rangoon	May 9-June 26	20	15	
Do	June 27-Sept 18	74	63	
Indo-China				
Saigon	May 23-June 26	8	3	
Do	July 18-Aug 7	2	1	
Iraq				
Baghdad	Apr 18-June 12	161	108	
Do	July 18-Sept. 11	4	4	
Japan				
Yokohama	July 2-Aug 10	9	8	
Java				
Batavia	Apr 24-June 19	65	65	
Do	June 26-Sept 11	64	62	
Cheribon	Apr 11-24	3	3	
East Java and Madura	June 13-19	1	1	
Do	July 25-31	1	1	
Surabaya	Aug 22-28	17	2	
Madagascar:				
Ambositra Province	May 1-15	4	4	Septicemic.
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Majunga Province	do	10	6	
Mananjary Province	do	1	1	
Moramanga Province	Apr 1-15	2	2	Do.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 5, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Madagascar—Continued				
Tananarive Province				Apr 1-June 30, 1926 Cases, 130; deaths, 120 July 1-August 15, 1926 Cases, 47, deaths, 41
Towns—				
Majunga	Aug 1-15	14	10	
Tamatave (Port)	May 16-31	1	1	
Do	July 1-Aug. 15	6	5	
Tananarive	Apr. 1-June 30	7	7	
Do	July-Aug 15	7	7	
Mauritius				
Port Louis	July 31	1	1	
Nigeria				Feb 1-Apr 30, 1926. Cases, 115, deaths, 92
Peru				May-June, 1926 Cases, 57, deaths, 16 July 1-Aug. 31, 1926, Cases, 44, deaths, 16
Departments—				
Ancash	May 1-31			Present
Do	July 1-31	2		
Cajamarca	May 1-June 30	10	4	
Do	Aug 1-31	1		
Ica	May 1-31	1		
Do	July 1-31	1		
Libertad	May 1-31	4		
Lima	May 1-June 30	29	12	
Do	July 1-Aug 30	40	16	
Piura	June 1-30	13		
Russia				Jan 1-Mar 31, 1926 Cases, 37
Senegal				Nov 1-30, 1925 Cases, 3, deaths, 2 Mar 1-Apr 30, 1926 Cases, 15, deaths, 4.
Siam				Apr. 1-Sept 11, 1926. Cases, 15; deaths 10
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Do	July 4-17	1	1	
Syria				
Beirut	July 1-Aug. 10	2		
Do	Oct 15			Present
Tunisia	May 11-June 30	174		
Do	July 1-20	12		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Turkey				
Constantinople	Aug 1-Sept 25	7	4	
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug. 21	3	3	
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District	Aug. 15-21	1		
Protestpan	May 9-22	3	3	
On vessel.				
Steamship Zaria	September, 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa; 29 plague-infected rats found on board.

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 20	14		
Do	July 1-Aug 31	3		
Belgium				
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-Aug. 31	16	8	
Brazil:				
Bahia	June 20-26	1		
Do	June 27-Sept. 11	63	36	
Manaos	Apr 1-30		5	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 5, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Brazil—Continued				
Para	May 16-June 26	26	25	
Do	June 27-Sept 25	29	19	
Pernambuco	July 11-Sept 11	115	18	
Porto Alegre	Aug 10-31	2		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 25	2,534	1,333	
Santos	Mar. 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Do	Sept. 11-17	1		
Canada				May 30-June 12, 1926 Cases, 46
Alberta				May 30-June 12, 1926 Cases, 3
Calgary	Sept 5-Oct. 16	21		June 27-Oct 16, 1926 Cases, 53
British Columbia—				
Vancouver	Aug 16-Sept 12	3		
Manitoba				May 30-June 26, 1926 Cases, 15
Winnipeg	June 6-12	5		June 27-Sept 25, 1926 Cases, 19
Do	July 4-Sept 4	12		
Ontario				May 30-June 26, 1926 Cases, 36, June 27-Oct 16 Cases, 85
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2		
Kitchener	Apr. 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Peterboro	Sept. 1-30	10		
Toronto	July 18-Oct 9	11		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16 June 27-Oct 16 Cases, 87
Regina	July 4-Sept 25	3		
Ceylon				Mar 14-May 29, 1926 Cases, 44, deaths, 3 Sept 12-18, 1926 Cases, 2
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Changsha	Aug 8-14	1		
Chungking	May 2-Sept 4			Present.
Foochow	do			Do.
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do.
Do	June 27-July 3	1		Do.
Dairen	Apr 26-June 20	69	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do.
Harbin	May 14-June 30	21		Do
Do	July 1-28	12		
Kai-yuan	May 16-June 30	10		Do
Kungchuling	June 13-19	1		Do.
Liaoyang	May 16-June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do
Ssupingkai	May 16-June 30	2		Do
Teshihchiao	do	2		Do
Wa-feng-tien	do	3		Do.
Nanking	May 8-Sept 18			Present

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 5, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Shanghai	May 2-June 26	10	25	Cases, foreign. Deaths, population of international concession, foreign and native
Do	June 27-July 24	3	3	
Swatow	May 9-Sept. 18			Sporadic.
Tientsin	June 2-26		1	Reported by British municipality.
Wanshien	May 1			Prevalent.
Chosen				Mar 1-May 31, 1926. Cases, 548, deaths, 121.
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Aug 19	11	5	
Cairo	Jan 29-Apr 1	16	4	
Estonia				May 1-June 30, 1926: Cases, 3.
France				Mar. 1-June 30, 1926: Cases, 141.
Paris	Sept. 1-20	21	5	
St Etienne	Apr 18-June 15	7	3	
French Settlements in India	Mar 7-June 26	282	282	
Gold Coast	Mar 1-May 31	662	13	
Great Britain				
England and Wales				May 23-June 26, 1926 Cases, 933. June 27-Sept 25, 1926: Cases, 1,289
Birmingham	Sept 26-Oct 2	1		
Bradford	May 23-29	1		
Do	Aug. 29-Sept 4	1		
London	Sept 26-Oct. 2	2		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-Oct. 9	4		St Gateshead, several cases reported.
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Oct. 2	9		
South Shields	Oct. 3-9	1		
Greece.				
Athens	July 1-31	71	6	Including Piræus.
Saloniki	June 1-14		3	
Guatemala.				
Guatemala City	June 1-30		2	
India				Apr. 25-June 26, 1926; Cases, 54,851, deaths, 14,771 June 27-Aug 28, 1926: Cases, 20,381; deaths, 6,536.
Bombay	May 2-June 26	220	134	
Do	June 27-Sept 18	112	61	
Calcutta	Apr 4-May 29	171	152	
Do	June 13-26	24	18	
Do	June 27-Sept. 18	38	37	
Karachi	May 16-June 26	44	18	
Do	June 27-Aug 21	13	7	
Madras	May 16-June 26	7	4	
Do	June 27-Sept 25	58	15	
Rangoon	May 9-June 26	10	5	
Do	July 4-Sept. 11	21	4	
Indo-China				
Saigon	May 9-June 26	2		
Iraq				
Baghdad	do	8	3	
Do	July 4-Sept 11	3	1	
Basra	Apr. 18-June 22	34	25	
Do	Aug 15-21	1		
Italy				Mar 28-June 26, 1926: Cases, 34. June 27-July 10, 1926: Cases, 3.
Catania	Aug. 9-15	2		
Rome	June 14-20	4		Entire consular district, including island of Sardinia
Jamaica				Apr. 25-June 26, 1926: Cases, 201. (Reported as alastrim)
Do				June 27-Sept 25, 1926 Cases, 238. (Reported as alastrim)
Japan				Apr. 11-June 19, 1926. Cases, 641.
Kobe	May 30-June 5	1		
Nagoya	May 16-June 22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug. 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 5, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Java:				
Batavia	May 15-June 25	2		Province
Do	July 24-Aug 28	5		Do
East Java and Madura	Apr. 11-July 3	100	6	
Do	July 4-Aug 7	43	1	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Do	July 18-Aug 28	63	3	
Latvia				Apr 1-June 30, 1926 Cases, 5.
Mexico				Feb. 1-Apr 30, 1926 Deaths, 982.
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-Sept. 27		8	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
Do	July 25-Sept 25	6		Do
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present 100 miles from Chihuahua.
San Luis Potosi	June 13-26		7	
Do	July 4-Oct. 16		18	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Do	July 1-Sept 30		13	
Netherlands:				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-Apr 30, 1926. Cases, 404, deaths, 33.
Persia:				
Teheran	Apr 21-June 22		7	
Peru:				
Arequipa	June 1-30		1	
Poland				Mar. 28-May 1, 1926: Cases, 12, deaths, 1 June 27-July 24, 1926 Cases, 2, deaths, 1.
Portugal:				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Sept 25	22	6	
Oporto	May 23-June 5	4		
Do	July 11-24	2		
Russia				Jan 1-Mar. 31, 1926 Cases, 2,103
Siam				Apr 1-Sept. 11, 1926. Cases, 564, deaths, 222.
Bangkok	May 2-June 12	23	20	
Do	July 4-Sept 11	59	47	
Spain:				
Valencia	Aug 22-Sept 25	2		
Straits Settlements:				
Singapore	Apr 25-May 1	1		
Do	July 11-17	1		
Sumatra:				
Medan	Aug 22-28			One case varioloid.
Switzerland:				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tripolitania	Apr 1-30	11		
Tunisia				Apr 1-June 30, 1926 Cases, 17
Tunis	Aug 11-30	2		
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks
Do	Aug 15-21			Do
Idutya district	May 23-29			Do
Natal	May 30-June 5			Do
Orange Free State	June 20-Aug 28			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Do	Aug. 29-Sept 4	1		Native
Johannesburg	May 9-June 12	5		
Do	July 11-Sept. 4	2		
Yugoslavia				Apr 15-30, 1926. Cases, 2, deaths, 1.
Zagreb	Aug. 9-15	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 5, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
On vessels:				
S S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed At Durban, Union of South Africa June 16, 1926 One suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Do	July 21-Aug. 31	3		
Argentina:				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Do	Aug 1-31	9	1	
Bulgaria				Mar 1-June 30, 1926: Cases, 87, deaths, 14
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Valparaiso	Apr. 29-May 5		1	
Do	Aug 14-Sept 18	7		
China				
Antung	June 14-27	7	1	
Do	June 28-Sept. 19	31	1	
Canton	May 1-31	1		
Chungking	Aug 29-Sept 4			Present
Ichang			1	Reported May 1, 1926. Occurring among troops
Wanshien				Present among troops, May 1, 1926. Locality in Chingking consular district.
Chosen				Feb 1-May 31, 1926: Cases, 887, deaths, 91
Chemulpo	May 1-June 30	38	2	
Do	July 1-31	7	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Do	July 1-Aug. 31	8		
Czechoslovakia				Jan 1-June 30, 1926 Cases, 156; deaths, 6.
Egypt				
Alexandria	July 16-Aug 19	3		
Cairo	Jan 29-Mar 4	74	17	
Do	July 23-Aug 5	1		
Port Said	June 4-24	4	1	
Do	July 9-Aug 19	4	1	
Great Britain				
Scotland—				
Glasgow	July 30-Aug 21	9	1	
Ireland (Irish Free State):				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Kerr County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-May 8, 1926 Cases, 3.
Palermo	Sept 12-18	1		
Japan				Mar 28-May 29, 1926 Cases, 37.
Latvia				May 1-June 30, 1926: Cases, 19
Lithuania				Mar 1-June 30, 1926: Cases, 199; deaths, 22.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 5, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Mexico				Feb 1-Apr 30, 1926 Deaths, 110
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal District
Do	June 13-19	9		Do
Do	July 25-31	3		Do
Do	Aug 15-Oct 9	46		Do
San Luis Potosi	June 13-26			Present city and country
Morocco				Mar 1-June 30, 1926 Cases, 426
Norway				
Stavanger	Sept 6-12	1		
Palestine				Mar 1-June 30, 1926 Cases, 14, deaths, 1 Aug 10-Sept 13, 1926 Cases, 5
Gaza	July 6-12	1		
Haifa	July 13-Aug 30	5		
Halalal	Aug 17-23	1		
Jaffa district	June 15-28	5		
Do	Sept. 28-Oct. 4	1		
Jerusalem	Sept. 14-27	2		
Majdal district	July 13-Aug. 2	2		
Nazareth district	do	3		
Tiberias	Aug 3-9	1		
Yavneil	Aug 17-23	1		
Persia:				
Teheran	May 23-June 22		1	
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85 June 27-July 24, 1926 Cases, 147, deaths, 11
Rumania				Mar 1-May 31, 1926: Cases, 711, deaths, 69
Russia				Jan. 1-Mar 31, 1926 Cases, 14,814
Tunisia				Apr 1-June, 30, 1926 Cases, 110
Tunis	June 11-30	3		
Turkey				
Constantinople	June 16-22	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths, 19
Do				July 1-31, 1926 Cases, 90, deaths, 17
Cape Province				Apr 1-June 30, 1926. Cases, 202, deaths, 24, native July 1-31, 1926 Cases, 58, deaths, 15
Glengray district	June 27-July 3			Outbreaks
Grahamstown	do	1		
Natal				Apr. 1-June 30, 1926. Cases, 28 July 1-31, 1926 Cases, 23; deaths, 2
Durban	July 25-Aug 14	10	1	
Orange Free State				Apr 1-June 30, 1926: Cases, 24, deaths, 4. July 1-31, 1926, Cases, 7
Transvaal				Apr 1-June 30, 1926. Cases, 10; deaths, 5. July 1-31, 1926 Cases, 2 Aug 15-21, 1926
Johannesburg	Aug 29-Sept 4	1		Outbreaks
Walkkerstroom district	June 20-26			Outbreaks
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 48, deaths, 7. July 1-Aug 31, 1926, Cases, 3, deaths, 1
Zagreb	May 15-21	1		

YELLOW FEVER

Brazil	Reported June 26			Present in interior of Bahia, Piapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr 1-May 31	6	3	

X.

TREASURY DEPARTMENT

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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C C PIERCE, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912

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PUBLIC HEALTH REPORTS

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ORGANIZATION OF THE HEALTH PROGRAM OF A UNIVERSITY

By D F SMILEY, M D, Medical Adviser, Cornell University

Just as in the whole field of education, so in the special field of health education, there has been in recent years a marked change in the objectives Health has been redefined as "the quality of life that renders the individual fit to live most and to serve best," [1] and the aims of health education in the primary and secondary schools have been stated in the following terms: [2]

1 To instruct children and youth so that they may conserve and improve their own health

2 To establish in them the habits and principles of living which, throughout their school life and in later years, will assure that abundant vigor and vitality which provide the basis for the greatest possible happiness and service in personal, family, and community life

3 To influence parents and other adults, through the health education program for children, to better habits and attitudes, so that the school may become an effective agency for the promotion of the social aspects of health education in the family and community as well as in the school itself

4 To improve the individual and community life of the future; to insure a better second generation, and a still better third generation, a healthier and fitter nation and race.

A health-educational program is in operation in most of our urban schools, and even at this early date results are becoming quite evident [3] The next step in the development of the health-educational program is undoubtedly to be taken in the colleges and universities of the country. A preliminary survey of existing conditions has already been made and is shortly to be published,[4] and on the basis of those facts a comprehensive program is to be launched. The urgent question of the next few years in our college and university health circles is to be: How can we best organize our institution for health purposes? As a contribution to the solution of that trying problem I am herewith presenting suggestions based largely on Cornell University's experience in the field of health education.

[1] J F Williams, Personal Hygiene Applied. W. B Saunders, Philadelphia, 1922.

[2] Report of Joint Committee on Health Problems in Education. By T D Wood, New York City, 1924

[3] For the last 3 years each entering class at Cornell University has shown progressively fewer physical defects and faulty health habits than the preceding class.

[4] Report of President's Committee of Fifty on College Hygiene By Thomas A Storey, College of the City of New York, New York City

I. AN ANALYSIS OF THE HEALTH NEEDS OF THE AVERAGE COLLEGE STUDENT

1. Healthful living conditions.
   - Good food at reasonable prices.
   - Sanitary water and milk supply.
   - Clean dining rooms and food handlers.
   - Healthful study rooms and classrooms.
2. Adequate health service.
   - Health advice
   - Infirmary services.
   - Medical examination service and laboratory service.
   - Communicable-disease control.
3. Well-adjusted activities
   - Congenial studies.
   - Suitable physical exercise
   - Wholesome recreation and sociability.
   - Thoughtful religious study and discussion.
4. Effective health instruction.
   - General biology.
   - Human anatomy.
   - Human physiology.
   - General bacteriology.
   - Personal hygiene.
   - Sanitation.
   - Public health.

II. RESPONSIBILITIES OF VARIOUS DEPARTMENTS FOR MEETING THE HEALTH NEEDS OF THE STUDENT

The health needs of the student are found to involve not only the university health service but the department of physical education, the departments of biology, bacteriology, anatomy, physiology, sanitary chemistry, dairy industry, sanitary engineering, the department of administration, the University Christian Association, the University Union or Social Center, and the various college orientation courses. And if we consider the ramification of one small part of the field of hygiene, i. e., sex hygiene, we find the following possibilities suggested by the American Social Hygiene Association and the Interfraternity Council:[5]

Sex and reproduction and their impulses and implications are not, as we have allowed ourselves to conceive them, isolated and distinct phases of life They are normal and integral parts of complete life, and furthermore, they irradiate into and profoundly modify all the rest of life that is worth while. For these reasons the educational treatment of these factors should not be unnecessarily

[5] An appeal for the greatest personal and social health for students. Report of the Committee on Social Hygiene of the Interfraternity Conference, 120 Broadway, New York City, 1922

separate from other phases of education, but wherever possible should be imbedded quite naturally and for the most part inconspicuously in all the physical, intellectual, emotional, esthetic, social, and moral education and training the youth receives

For similar reasons sex education should not be partial—that is, exclusively physical or emotional or religious—but it should represent a fair synthesis of all the interests and points of view which contribute vitally to ideas, motives, and conduct in respect to sex This synthesis must include the facts of the underlying sciences, as biology, physiology, psychology, hygiene, and pathology, and, no less, the idealism of the esthetic, social, and religious cultures, and equally the practical training and inspiration of everyday conduct and relations A sound or workable philosophy and practice of sex life can not be had if it ignores any one of these aspects

As a corollary of the above, the general program of the effective educational institution must be on an adequate hygienic basis throughout—in administration, in curriculum, in "activities," and in its social life.

Apparently, then, the health-educational responsibilities are widespread throughout the departments of the university.

III THE ORGANIZATION OF THE UNIVERSITY TO MEET ITS HEALTH EDUCATIONAL RESPONSIBILITIES

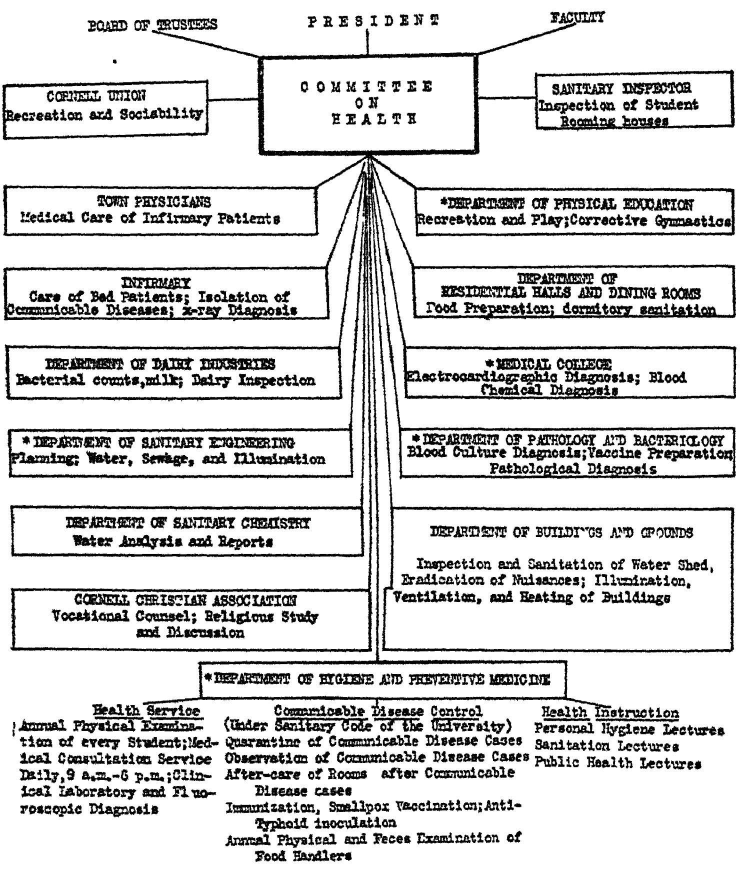
In the recent beginnings of health education in the universities of the country we have had examples of health education combined with physiology,[6] with biology, with physical education,[7] with bacteriology—largely as a matter of expediency and for the purpose of utilizing for the new health work the preexisting machinery most suited to the task. In many instances the scheme has been so effective as to result in a permanent organization In some quarters, however, the organization problem has been attacked from the opposite point of view; an attempt has been made to magnify the health interests and centralize under one head all of the health educational activities. Thus we have departments of student health representing the combined fields of health service, hygiene teaching, environmental sanitation, physical education, and intercollegiate athletics.[8] But even in the most pretentious departments of health there are some of the student's health needs still to be ministered to outside the realm of that department, and this raises the general question of whether it is worth while disrupting any of the old schemes of organization and subordinating any of the older departments for the purpose of attempting the impossible, i. e , having *all* of the health educational work centralized under one head in a university department of health.

When the opportunity for health educational expansion came, through the Interdepartmental Social Hygiene Board support at Cornell in 1919, it seemed wiser to charge one department, that of

[6] Vassar
[7] Princeton, McGill, Smith, Rochester.
[8] University of Michigan, Stanford University

the medical adviser (which had been responsible for physical examinations, health advice, and communicable disease control since 1911), with the added responsibility of hygiene instruction,[9] and then seek the cooperation of related departments through the organization of a faculty committee on health and a faculty committee on instruction in hygiene and preventive medicine, rather than through the actual consolidation of departments.

HEALTH OF THE STUDENT BODY AND SANITATION OF THE UNIVERSITY COMMUNITY



*Department represented in Committee on Health

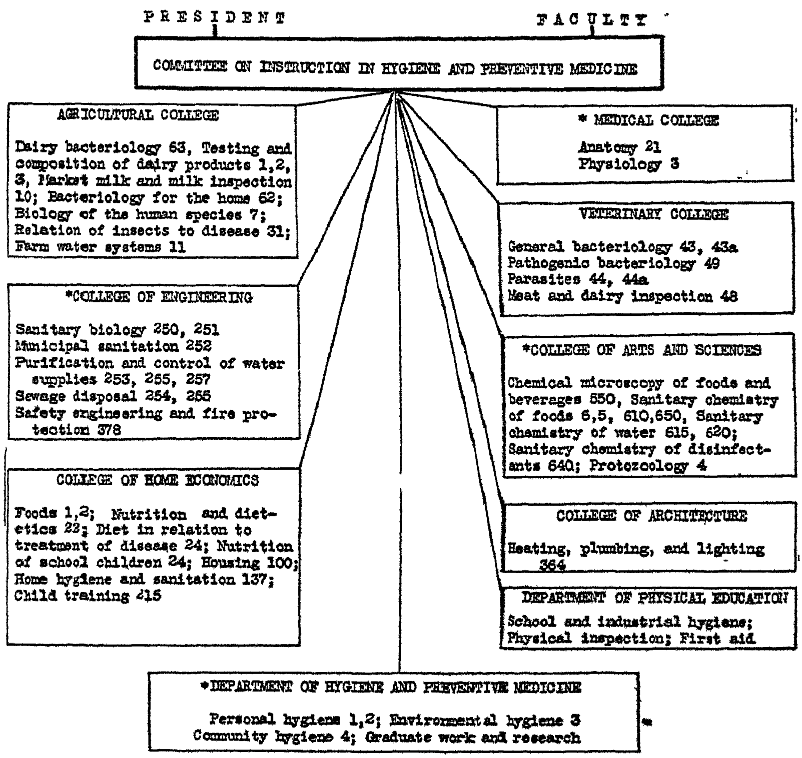
IV. THE CORRELATION OF VARIOUS DEPARTMENTS FOR HEALTH EDUCATION

Under this scheme the president of the university appoints each year from the various departments related to health five members of the committee on health, which committee constitutes the central

[9] Though this was first done in 1919, hygiene had been taught at Cornell either in the department of zoology or in the department of physical education since the founding of the university in 1868

authority in health matters and acts on all questions of policy in health affairs.[10] This insures that the various departments represented on the committee become conversant with the health problems facing the whole university. It also insures to the university the advantage of the consensus of opinion on important health questions of the departments concerned. The executive officer of this committee is the university health officer, in whom is vested the committee's authority for the purpose of administering the university

INSTRUCTION IN HEALTH AND PREVENTIVE MEDICINE AT CORNELL



*Department or college represented on Committee on Instruction in Hygiene and Preventive Medicine

sanitary code. The chart on page 2634 shows the scheme for correlation of health activities through this committee.

The committee on instruction in hygiene and preventive medicine is composed of four faculty members appointed by the president from departments related, always, however, including the dean of the university faculty. This insures faculty interest and cooperation in health education throughout the university without any reorgan-

[10] This faculty committee is usually identical with the trustee's committee on health, and it therefore carries the authority of the faculty and board of trustees

ization or subordination of departments already existing. It also administers the university requirement for four terms of hygiene instruction for each student. The scheme for correlation through this committee is shown in the chart on page 2635

Under such a system the health educational work of a university can be markedly developed and expanded; each aspect of the work, however, being developed in the department peculiarly adapted to that purpose, and the department of health itself remaining free from any suspicion of being desirous of dominating other fields, such as physiology, bacteriology, physical education, or organized athletics, with the health interest To be sure it is extremely important that the health interest be developed and stressed in the work of these related departments, but it is not entirely clear that in such departments health interests should supersede vocational or scientific investigative interests, or that health values should be more sought in physical education and athletics than such moral values as courage, fairness, etc.

V. THE DEVELOPMENT OF THE HEALTH EDUCATIONAL PROGRAM IN THE CORNELL UNIVERSITY DEPARTMENT OF HEALTH

The development of the health educational program in the university department of health we have found at Cornell to be almost entirely a job for physicians, not nurses—for young physicians, not retired practitioners—for physicians interested in health education and preventive medicine rather than specialists or those interested primarily in therapy. We have found that full-time physicians are preferable to part time, that men physicians are preferable for men and women physicians for women, that regular professorial ratings in terms of instructorships, assistant professorships, and professorships are preferable to other ratings, and that a schedule permitting each man to distribute his energy over the five fields of physical examination, medical consultation, communicable-disease control, instruction in hygiene and preventive medicine, and research, was preferable to directing his energy to any one field alone Our salary range for graduate physicians has been from $2,250 to $4,000 per nine-month school year, and there is no doubt that this level will have to be raised if we are going to continue to attract and hold the type of worker demanded. The hours of routine work have been six a day, leaving some time for research work or special follow-up work on the cases found in our examinations. On this basis we have found that we need at least one physician to every 500 students; and if the mental hygiene problems of the student body are to receive adequate attention, the proportion of doctors must of necessity in the future be considerably increased.

The work of the department of hygiene can be conveniently divided and described under the five headings—health examination, medical consultation, communicable-disease control, health education, research

Health examinations—Every undergraduate and every entering graduate student is required to have an annual physical examination. The examination which we have adopted as our standard procedure takes about 40 minutes for entering students and 30 minutes for old students, and is completed entirely, with the exception of the urine examination, by one physician For statistical accuracy the group method of examination is far preferable, but we have found that an examination has much more health value if the history, record of health habits, and physical findings are all at once in the mind of the examiner and he is able to devote his entire attention to the health problems of that one individual for half an hour and attempt to convince him of the importance of rectifying the remediable defects or faulty health habits found With such a system we, of course, make no attempt to complete our examinations during one period in the fall, but simply schedule our examinations one per office hour per doctor right through the year and thus complete the examination of the 4,800 undergraduates and entering graduates between the 1st of October and the 1st of June The appointments for these examinations are made at the beginning of the first term by all entering students and sophomores, at the beginning of the second term by all juniors and seniors. Athletes are examined first of all and given their athletic number or rejected from athletics early in the fall. No athlete is permitted to represent the university on an athletic team without having qualified for and procured an athletic number from the medical adviser's office. Recruits for the university reserve officers' training corps are accepted or rejected according to Army regulations at the time of their regularly appointed health examination. We therefore duplicate no examinations and give no special examinations of any kind—our only examination being our regular annual physical examination.

This plan is open to the objection that an entering student might go on undetected until almost midyear with communicable disease, but as a matter of fact we are more troubled by the acute infectious diseases occurring after Christmas and Easter vacations than by those occurring after the summer vacation, and it is questionable whether it would ever be worth while to examine the whole student body for communicable disease immediately after each vacation or to rush the examination of all students in the fall in order to pick up a little earlier the occasional case of tuberculosis or syphilis present in the entering class. A full-time force also demands a full-time examining schedule.

Inspection of the examination and history forms as found below (the forms for women students differ slightly) reveals certain inadequacies in the routine examination made necessary by the short time provided for examination; but provision can usually be made for a rectal, blood, eye ground or fluoroscopic examination if the history or physical findings indicate the necessity of such special examination. Serious organic disorders like chronic cardiac valvular disease, nephritis, or tuberculosis are found in a very small number of students—rarely more than 2 per cent; the majority of our findings are defects in posture, defects in vision, nasal obstruction, acne, malnutrition, infected tonsils, faulty habits of sleep, exercise, use of stimulants, etc. Our entering students have averaged 2½ of these remediable defects or faulty health habits per student for the past five years (though each succeeding entering class appears to have remedied slightly more of its defects before college entrance, and the urban group appear to have remedied their defects somewhat more than the rural group).[11]

Follow-up studies on the 150 to 200 albuminuria cases, 60 to 100 glycosuria cases, 50 to 100 chronic chest cases, etc., are made by calling in the student at intervals by letter. Among these cases we rarely find more than 2 actual cases of nephritis, 2 cases of true diabetes, 25 cases of definite tuberculosis (out of which, perhaps, 3 to 5 are active and forced to leave school and seek sanitarium treatment), and 50 actual cases of chronic cardiac valvular disease.

In our physical examinations we plan on devoting about two-thirds of our time to detecting defects and faulty health habits and one-third to convincing the student as to the necessity of remedying the condition found; thus one-third of the physical examination time is devoted to pointed personal health instruction This also gives an opportunity for discussion of sex-hygiene topics, though we raise this question ourselves only in the examination of freshmen. The encouraging fact in this whole field is that more than 94 per cent of the abnormal conditions found can be remedied or improved.

Medical consultation service—We have found that, in health as well as in other fields, "a stitch in time saves nine." Our medical offices are open daily from 9 a. m. to 6 p m., not to set fractures, nor to refract eyes, nor to give time-consuming treatments, but to give medical advice for any physical condition deviating even ever so slightly from the normal. This advice may be in the form of a suggestion that a specialist be consulted. or that diet or habits of life be somewhat altered, or that certain lines of simple medication be followed, or that the student go to the infirmary for bed care; but in each consultation the final consideration is, How can we

[11] D. F. Smiley: Health Inventory of Rural and Urban Students The Nation's Health, Vol. VIII, No. 1, January, 1926.

prevent a recurrence of the disabling condition? That this service is appreciated is evidenced by the fact that we carry on about 25,000 of these voluntary consultations per year, an average of 5 for each student in the university. Of these consultations, about 4,000 are for "colds" or their complications, about 750 for digestive disorder, about 650 for eyestrain, about 550 for indefinite headache or fatigue, about 250 for constipation, about 250 for furuncle, about 250 for dysmenorrhea; no other illness provides more than 200 cases a year. The fact that such large numbers of cases of digestive disorder, eyestrain, constipation, and furuncle occur year by year is a challenge to our health educative forces; the fact that "colds" and dysmenorrhea are still so common is a challenge to our health research forces.

The free use of the university infirmary in the case of any student needing bed care is one of the most valuable preventive factors in our health program. It is simply assumed that, since each student has paid his $5 infirmary fee each term, he is entitled to infirmary care whenever he is sick enough to be in bed. The only check needed against abuse of the privilege of infirmary care is the provision that, while there, each student must be under the daily care of his private physician, whom he chooses from the practicing physicians of the city. The efficacy of this system is to some degree attested by the fact that, of the 658 cases of influenza occurring during the past month of March, practically all were seen early, put to bed immediately in the infirmary, and permitted to leave only when they were safely convalescent. This meant sometimes caring for 140 to 150 patients a day in the infirmary; but it unquestionably aided in keeping the complications with pneumonia down to six cases—a figure less than 1 per cent of the total influenza cases.

Recommendations for excuse from class because of illness are recognized by the various college administrative offices only as they come from the medical adviser's office. Recommendations from town physicians and out of town physicians are brought to the medical adviser's office and filed and official recommendations issued. No official recommendation for excuse from classes is issued by the medical advisers at a period later than 48 hours after the resumption of classes, and no recommendation is made unless the student presents definite signs of illness or a certificate of illness from a physician. Thus we maintain a fairly complete morbidity record for the student body and prevent students from staying at home ill and returning to classes while still infectious. During the past year 1.28 per cent of the 4,570,533 school hours available to the 4,897 undergraduate students was lost as the result of illness. The lost time of instruction hours among the 1,173 women students was 1.8 per cent, and among the 3,724 men students was 1.1 per cent.

Communicable disease control.—The control of communicable disease in a college community is somewhat simpler than in a primary or secondary school because of the larger number of immunes. As a rule, for instance, we find that 90 per cent of our entering students have had measles and about 50 per cent have had mumps, whooping cough, and chickenpox. Therefore, in the construction of our university sanitary code we felt it safe to waive isolation of all contacts and substituted instead (in the case of the nonimmunes) a system of observation at the medical adviser's office at one or two day intervals throughout the incubation period of the disease in question. Immediate isolation of the patient in the contagious ward of the infirmary for a period extending from a week in case of measles to a month in scarlet fever is of course demanded. A satisfactory certificate of vaccination against smallpox is a requirement for matriculation. Such a certificate is deemed satisfactory only as it records a positive reaction (vaccinia, vaccinoid, or immune reaction) within five years, or three unsuccessful attempts within the same period. Tuberculosis cases showing tubercle bacilli in the sputum are not permitted to attend classes unless they furnish the medical adviser (who is also the university health officer) with satisfactory evidence that their care of secretions and their mode of life are such as to preclude danger of spread to others. Cases of gonorrhea (rarely more than eight a year) are not permitted to attend classes until treatment has been instituted and until they have a permit to return from the medical adviser Cases of syphilis (rarely more than three to five a year) are not permitted to attend classes until treatment has been instituted and there are no open lesions on skin or mucous membrane and until they have a permit to return from the medical adviser.

Synopses of this code are posted in all university buildings and dormitories and distributed to the various fraternities and rooming houses, and cordial cooperation of the student body is the general rule. As a result, we rarely see more than 40 cases a year of any one of these reportable diseases, though each year we expect an outcropping of one or several of these diseases after the Easter and Christmas recesses. The amount of time put into this system of control by the medical staff is rather large; we often call in and observe 700 to 800 contacts of various diseases in the course of the year. But among that group of contacts we will usually detect 10 to 20 secondary cases, and we therefore feel that the time spent in observing contacts is well spent, provided the contacts are carefully selected.

Though this system never entirely prevents the occurrence of these infectious diseases of childhood, it enables us (judging by the experience of the past six years) to keep them in hand, the number of cases rarely exceeding 75 a year. In regard to influenza, "colds," and conjunctivitis, however, we feel very much less optimistic.

Health instruction.—Just what a college student should know about health is a question which, Dr. Livingston Farrand, president of the university, attempted to summarize in the following terms: [12]

1 He should have a knowledge of the physiological basis for sound health habits, such as regular and sufficient hours of sleep, right posture, suitable exercise, and proper elimination.

2. He should know the types, amounts, and proportions of the various food elements essential to the proper nurture of his body

3 He should have an acquaintance with the principles of normal mental action and the conditions underlying the more common variations from normal state of mind

4 He should have a general understanding of the sex instinct—its stages of development, its normal expression, and the values and penalties attaching to it

5. He should have a knowledge of the factors determining infection and resistance and the principles of artificial immunization in the case of certain of the common infectious diseases

6 He should have enough knowledge of the causes and prevention of the degenerative diseases to offer a prospect of passing through middle life without a breakdown.

7 He should know, and therefore be armed against, health hazards lurking in the environment, such as polluted water and milk supply, congestion in housing, poisonous dusts of certain industries, infected soil, etc

8 He should appreciate the necessity for frequent medical and dental examination.

9. He should have an intelligent basis for choosing wisely his medical and dental advisers, and for realizing that the modern practice of medicine is grounded on science and not on mystery, fancy, and tradition.

10 He should have a knowledge of the important health problems facing the community, of the methods of attacking those problems, and of the results to be expected from intelligent community action in the public health field.

Cornell, at its founding in 1868, required a 30-lecture course in hygiene for every student in his first year. This requirement continued until 1904, when it was abolished and a course in hygiene was offered but not required. This scheme continued until the fall of 1919, when hygiene again became a required subject, this time a 60-lecture course. These lectures are given by the physicians of the medical adviser's office to the freshmen and sophomore class divided into groups averaging 135 members each and meeting once a week. The lectures are 50 minutes in length and are supplemented by considerable demonstration material and by charts. A notebook and a

[12] Report of meeting of American Public Health Association, Atlantic City, May 18, 1926, New York Times, May 19, 1926

preliminary examination are required each of the four terms. The final examination is waived where the term's average in notebook, preliminary examination, and attendance is 85 per cent or better. The "hygiene requirement" is administered by the dean of the university faculty and the Faculty Committee on Instruction in Hygiene and Preventive Medicine No credit is given, but the satisfactory completion of four terms' work in hygiene is a university requirement for graduation. Following is the schedule of lecture topics of the past year (1925-26):[13]

OUTLINE OF LECTURE SCHEDULE

HYGIENE I—PERSONAL HYGIENE

1 The health program at Cornell University—Factors that influence health
2 Bacteria and disease—The development of the germ theory
3. Infection and resistance.
4 Immunity.
5. The hygiene of the nose and throat—Nasal obstruction; tonsils and adenoids; ear trouble
7. "Colds"—Are they preventable?
8 The personal prevention of tuberculosis
9 The preventable causes of mental disease
10. The causes and prevention of nervousness.
11. The importance of positive health to the individual and to the community
12. The structure and physiology of the genital system
13. The mechanism of reproduction—The development of the sex instinct—Hygiene of sex.
14. The venereal diseases.

HYGIENE II—PERSONAL HYGIENE

1. Foods—Types and amounts needed
2 The mechanism of digestion, absorption, storage, and utilization—The prevention of indigestion and constipation.
3 The hygiene of vision.
4. The functions and care of the skin.
5. The hygiene of growth
6. Teeth and their care
7. Posture and health
8. The hygiene of the circulatory system and kidneys
9. The muscles and exercise—The benefits of exercise.
10. Safeguarding athletics—Exercise facilities at Cornell.
11. Heredity and health.
12. The emergency treatment of unconsciousness—Artificial respiration.
13. The emergency treatment of wounds
14. Why an annual physical examination?—Results of examination of freshman class.

HYGIENE III—HYGIENE OF ENVIRONMENT

1. Man the most frequent source of infection for man—Epidemiology—Carriers.
2. Animals as sources of infection for man.
3. Air and disease—Climate and disease
4. Ventilation.

[13] The sex-hygiene content of these lectures has been published in Health Education Program, Cornell University, by D F Smiley Social Pathology, Vol. 1, No 5. United States Public Health Service

5 Soil and disease
6. Water and disease.
7 The provision of a safe water supply
8 Sanitary housing—Sanitary disposal of wastes
9 Food deficiencies, poisons, infections, adulterations
10 Milk and meat—Their proper production and handling
11 Alcohol, tobacco, coffee, and the narcotic drugs.
12 Nostrums and quackery
13 Insects and disease
14. Occupational health hazards

HYGIENE IV—PUBLIC HEALTH

1 The development of public health and preventive medicine
2 Community problems in mental hygiene—Mental disease. mental deficiency, delinquency, drug addiction
3 Community problems in sex hygiene—Venereal disease, illegitimacy, prostitution, divorce.
4 Tuberculosis and the community.
5 The problem of the diseases of middle life—The degenerative diseases and cancer.
6 The community's interest in maternity and infancy.
7 Safeguarding the health of school children
8 The health of the industrial workers
9 Military hygiene
10 The place of the voluntary health organizations in public health work.
11 Official health agencies
12 Physicians versus quacks—The problem of providing good medical care.
13 Nurses and hospitals—The problem of providing good hospital and nursing service
14. The cost versus the results of public health work.

Research.—Some of the most striking opportunities for research, peculiar to the field of health education in colleges and universities, are, we believe, along the following lines, though the numerous possibilities make choice difficult: Statistical study of morbidity rates for such minor disorders as "colds" and "grippe"; study of the effects of exercise upon the heart, kidneys, and blood vessels; study of albuminuria and glycosuria to determine type and cause; statistical study of afterlife of persons showing minor abnormalities such as slight hypertension or albuminuria or glycosuria or recurrent jaundice while in college; statistical study by questionnaire method to determine what constitutes the normal condition in regard to frequency of bowel movement, frequency of headaches, frequency of vomiting attacks, and any possible relationship to health habits; study of the results of vaccine therapy in cases of recurrent "colds," acne, furunculosis; study of the results of desensitizing treatment for hay fever; statistical study of the results of health educational work in the university.

Along all these lines we have been working and have attained some rather encouraging results. We hope that time will bring forth results in greater measure; but even in the absence of remarkable

findings the stimulation which accompanies research is a factor to be reckoned with throughout all the work of the department A university department of health which does not provide time and incentive and some facilities for research can not hope, we believe, to maintain a high standard either of work or of workers

VI MEASURING THE RESULTS OF THE HEALTH EDUCATIONAL PROGRAM

Most of the results of a health educational program are not measurable, most of the results are to be seen in the future rather than in the present Yet measurable results of our work are continuously being sought, and, after a fashion, we can begin to estimate roughly our successes and failures

In 1919–20 Dr Haven Emerson [14] found that, at Cornell University, 1.6 per cent of the school days available to the student body during the year were lost as the result of illness, 2 4 per cent being lost by the women, and 1.5 per cent being lost by the men During the past year (1925–26), and in spite of a heavy March influenza epidemic, the undergraduate student body lost only 1.28 per cent of the school days available, the women 1.8 per cent, the men 1.1 per cent. We believe that Cornell students are losing less school time as the result of illness than they did five years ago.

Another method of measuring our results is to be tried during the coming year, 1926–27. Using the table of defects and faulty health habits appended, we will mark each student at the time of the annual physical examination, deducting 5 per cent for every faulty health habit and every remediable defect found and marking on the basis of 100 per cent. We will thus rate each individual upon his health upkeep, and not penalize him for his health inheritance, or irremediable health deficit. An average health upkeep rating of about 85 per cent is what we think we have in our present entering class; an average health upkeep rating of 100 per cent is what we can aim to get in that same class at graduation. Certain it is that if health knowledge *can* prevent disease and foster health it ought to do ~~so to~~ a measurable degree in a period of four years among a group of college students

HEALTH UPKEEP GRADING TABLE [15]

Each group is valued at 5 per cent. Even 1 defect in a group subtracts the 5 per cent of the whole group.

1 *Nutrition*

More than 10 per cent underweight
More than 10 per cent overweight

2. *Posture*.

C or D grade of postural abnormality—
Stoop neck.
Round hollow back.
Drop shoulder.

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[14] Education in Health at Cornell University By Haven Emerson et al American Journal of Public Health, April, 1921

[15] [illegible]cations have been made in this table to adapt it to use for the women students.

3. *Vaccination*
   No vaccination mark and no history of smallpox
4. *Eyes*
   Vision 20/24 or less and not properly corrected by glasses.
   Vision 20/13 or more and not properly corrected by glasses.
5. *Ears*
   Discharging ear, not under treatment
   Impacted cerumen plugging entire canal
   Deafness, uninvestigated by specialist.
6. *Nose*
   Defects causing symptoms, yet uninvestigated by specialist.
7. *Sinuses*
   Chronic sinus infection, not under treatment
8. *Teeth*
   Uncorrected dental caries
   Abscessed teeth
   Marked tartar deposit
   Dead tooth not examined by X ray within two years
   Pyorrhea, not under treatment
9. *Tonsils.*
   Tonsils judged chronically infected from history and appearance.
10. *Hernia*
11. *Veins.*
   Hemorrhoids or varicose veins (operable).
12. *Genitals*
   Phimosis
   Large varicocele threatening atrophy of testes or causing pain.
   Hydrocele.
13. *Feet:*
   Improper posture of feet, grade C or D.
14. *Stimulants*
   Using more than—10 cigarettes a day, or
   5 pipefuls a day, or
   2 cigars a day, or
   2 cups of coffee a day, or
   2 cups of tea a day
15. *Bathing*
   Bathing less than twice a week.
16. *Eating habits*
   Indigestion and hurried meals
   Indigestion and eating irregularly.
   Indigestion and improper diet.
17. *Evacuation habits*
   Bowels constipated, and not given chance to move at regular time at least once a day.
18. *Exercise habits*
   Exercising less than—
   One hour a day walking.
   Two hours a week vigorous exercise.
19. *Sleep habits:*
   Less than 8 hours sleep, with fatigue symptoms.
20. *Recreational habits:*
   One hour a day through the week.
   One-half day on Saturday or Sunday, in addition to exercise time.

Department of Hygiene and Preventive Medicine, Cornell University

Year expect to graduate .... Name .... College ....

Examination date ....

HISTORY

	First year	Second year	Third year	Fourth year
Ithaca address				
Age .... Years .... Months				
Date of birth				
Place of birth				
Derivation of student				
English				
French				
German				
Jewish				
American				
or				
Name of member of family having—				
Pulmonary tuberculosis				
Cancer				
Diabetes				
Nephritis				
Epilepsy				
Insanity				
Heart disease				
Apoplexy				
Give age and cause of death				
Father				
Mother				
Brother				
Sister				
Have you had (give date)—				
Measles				
German measles				
Mumps				
Whooping cough				
Scarlet fever				
Chickenpox				
Diphtheria				
Pneumonia				
Malaria				
Mastoiditis				
Influenza				
Meningitis				
Smallpox				
Poliomyelitis				
Otitis media				

	First year	Second year	Third year	Fourth year
Have you had (give date)—				
Tonsillitis				
Pleurisy				
Gonorrhea				
Syphilis				
Tuberculosis				
Chronic bronchitis				
Chorea				
Epilepsy				
Neurasthenia				
Asthma				
Hay fever				
Nephritis				
Valvular heart disease				
Diabetes				
Rheumatism				
Fracture				
Dislocation				
Wounds				
Gassed				
Typhoid fever				
Nervous breakdown				
Do the effects of such illness persist?				
If so, what				
What operations have you had?				
Nasal				
Tonsils				
Adenoids				
Appendix				
Hernia				
Mastoid				
Circumcision				
or				
Have you had injury with loss of consciousness?				
Nature .... Date				
Vaccination				
Smallpox .... Date				
Typhoid .... Date				
Diphtheria .... Date				
Schick test .... Date				

Examination date ....

	First year	Second year	Third year	Fourth year
Did you have any of the following last year?				
Indigestion				
Constipation				
Headache				
Backache				
Nervousness				
Fainting				
Dizziness				
Coughs				
Expectoration				
Spitting of blood				
Nausea				
Vomiting				
Palpitation				
Deafness				
Night sweats				
Poor appetite				
Diarrhea				
Nosebleeds				
Hoarseness				
Chills or fevers				
Shortness of breath				
Swelling of feet or ankles				
Jaundice				
Sleeplessness				
Frequent urination nights				
Discharging ear				
Piles				
Convulsions				
Fits				
Painful feet				
Poor vision				
Speech defect				

	First year	Second year	Third year	Fourth year
How many colds did you have last year in your—				
Nose				
Throat				
Lungs				
Do you use tobacco?				
Form .... Amount				
Do you use tea or coffee?				
Cups per day				
How often do you bathe—				
Summer .... Winter				
When do you brush your teeth?				
Do your gums bleed easily?				
How many times did you go to a dentist last year?				
How much time do you spend at a meal?				
Are meals regular?				
Do you chew your food well?				
Do your bowels move regularly once a day?				
What exercise do you take and hours per day—				
Walks				
Games				
Gymnasium				
Track				
Etc.				
Do you sleep well?				
Hours per night				
Are your windows open?				
Previous occupation				
Are you self-supporting?				
Whole .... Part				
Hours work per day				

Department of hygiene and preventive medicine, Cornell University

MEDICAL EXAMINATION

No. .... Classification

Name .... College .... Class ....

Date ....

Weight .... Height	Weight .... Height	Weight .... Height	Weight .... Height ....
(1) Maturity	(1)	(1)	(1)
(2) Development	(2)	(2)	(2)
(3) Nourishment	(3)	(3)	(3)
Posture			
Skin:			
Scars			
Acute or chronic diseases			
Hair and scalp			
Mucous membranes			
Eyes:			
Vision ..... R L	R L	R L	R L
Astigmatism ..... R L	R L	R L	R L
Corrected ..... R L	R L	R L	R L
Astigmatism ..... R L	R L	R L	R L
Color vision			
Ocular movements			
Exophthalmos			
Eyelids			
Sclera			
Pupils			
Size			
Conjunctiva			
Ears			
Discharge			
Tympanum			
Cerumen			
Heating ..... R L	R L	R L	R L
Nose:			
Obstruction			
Discharge			
Sinuses			
Teeth:			
Caries .... Dead			
Notched incisors			
Misplaced			
Gums. Pyorrhea			
Tonsils			
Large .... Small			
Prominent .... Buried			
Removed .... Remnants			
Infected .... Acute			
Chronic			

Pharynx			
Neck			
(1) Thyroid	(1)	(1)	(1)
(2) Pulsations	(2)	(2)	(1)
Chest.			
(1) Shape	(1)	(1)	(2)
(2) Movements	(2)	(2)	(2)
Measurements			
Inspir ______ Expir ______ Expan ______	Inspir ______ Expir ______ Expan ______	Inspir ______ Expir ______ Expan ______	Inspir ______ Expir ______ Expan ______
Lungs ·			
Palpation			
Percussion			
Auscultation			
Heart.			
Apex beat—			
(1) Char			
(2) Location			
Thrill			
Area of dullness			
Murmurs			
Functional test			
Pulse			
Rate			
Rhythm			
Blood pressure (recumbent).			
S ______ D ______	S ______ D ______	S ______ D ______	S ______ D ______
Spine			
Organic ______ Functional ______			
Abdomen			
Hernia			
Hemorrhoids			
Genitals ______ Foreskin ______			
Tests ______ Varicocele ______			
Hydrocele			
Lymph nodes ______ Cerv ______			
Ax ______ Ing ______			
Nervous system:			
Speech defect ______ Tremor ______			
Coordination ______ Knee jerks ______			
Upper extremity			
Lower extremity			
Varicose veins			
Feet			
Urinalysis			
Recommendations			

Some Federal Safeguards of the Manufacture and Distribution of Diphtheria Toxin-Antitoxin Mixture

Diphtheria toxin-antitoxin mixture has in the last few years come into such general use in the prevention of diphtheria as to occupy a place of importance in the preventive immunization against disease probably second only to smallpox vaccine. Every year thousands of children are immunized, and the effect of this excellent prophylactic measure is being reflected in the lowered diphtheria rate which is evident in localities where much work has been done along this line. This result in the control of a dreaded disease of early childhood is all the more gratifying in that immunization is accomplished with practically no local or general reactions in the inoculated children. Very young children unquestionably take toxin-antitoxin mixture better even than those of school age, the ideal age for producing immunity being around the end of the first year of life. By this time the child will have lost the immunity acquired from the mother and will soon begin to come more generally into contact with other children, with the increase in danger of acquiring diphtheria. Heaviest mortality rates from diphtheria are encountered in children below the school age, and it is probably safe to say that the immunization of one child of this group will equal the immunization of five school children in effect on the diphtheria death rate. Some means of reaching this very important group of children is very much needed.

Toxin-antitoxin mixture is prepared only in establishments holding license issued by the Secretary of the Treasury, upon recommendation of the Public Health Service The service, through the hygienic laboratory, insures that the establishment is properly equipped with both physical apparatus and properly trained personnel to carry out the careful technique of manufacture and testing before recommending a license. This information is obtained always by means of a careful personal inspection by an officer of the Public Health Service.

The product is prepared, as the name indicates, from diphtheria toxin and diphtheria antitoxin, mixed in such proportions that the former, a poison derived from the diphtheria bacillus, is almost, but not quite, neutralized by the antitoxin, which is obtained from the blood of a highly immunized horse Very careful, accurate testing is always done on each lot.

The toxin is usually prepared in the establishment and allowed to age for at least one year By this time the first rapid deterioration will have taken place. The strength is next accurately determined by inoculation in guinea pigs weighing 250 grams (8–9 ounces). One drop of a good toxin is sufficient to prepare three doses, or one course of immunizing treatments of toxin-antitoxin mixture.

The antitoxin is a specially selected, highly concentrated product, as it is derived from the serum of the horse and it is desired to keep the dose as low as possible. One drop of a good antitoxin is sufficient to prepare 2,000 doses of toxin-antitoxin mixture The antitoxin is also aged to make stable, and then very carefully tested to determine the exact strength expressed in units per cubic centimeter. Guinea pigs are also used for this test

These two products are next diluted with sterile phenolized salt solution and mixed in such proportions that five human doses will kill a 250-gram guinea pig in from 6 to 20 days, while one human dose will cause a local reaction in the guinea pig, but will only cause paralysis in from 15 to 30 days. It is thus seen that the amount which shows no acute symptoms in the very susceptible guinea pig weighing one-half pound, could not possibly harm a child weighing from 20 to 80 pounds. This exact degree of toxicity is difficult to obtain, and can only be secured by careful measurements of ingredients, the strengths of which are accurately known. Frequent adjustments and re-tests are usually required.

After the mixture is completed and adjustments of toxicity are made the entire lot is filtered to sterilize, and final toxicity and sterility tests are applied by the manufacturer. If these tests are satisfactory and the manufacturer considers the mixture suitable for the market, samples of each lot are sent to the Hygienic Laboratory, where sterility and guinea-pig tests are also made. No lot is released for distribution until tests at the Hygienic Laboratory are satisfactorily completed.

Owing to the tendency of diphtheria toxin to deteriorate, and particularly when diluted, this product is allowed to remain on the market for only six months, and precautions should be taken to keep in a cold place but not allow it to freeze. Freezing causes a slight turbidity to appear and renders the product inactive.

With the present type of mixture which is in universal use, the original toxin content is one-thirtieth that of the older mixtures, the product is water clear, and with the great care in manufacture, with check testing by different laboratories, the public is assured a safe and effective product which may be employed with confidence.

SPECIAL COURSES FOR PHYSICIANS IN TREATMENT OF VENEREAL DISEASE

Surgeon General Hugh S. Cumming has announced that the United States Public Health Service, as a part of its cooperative work with State health departments in the control of venereal diseases, will give special courses of training to physicians, clinicians, and health officers at its venereal disease clinic, Hot Springs, Ark.

This clinic, which is operated by the Public Health Service in a new building belonging to the Department of the Interior, offers exceptional opportunities for the study of the venereal diseases, especially in clinical and laboratory diagnosis, treatment methods, and clinic management. Here studies of the many practical and scientific problems connected with venereal-disease control are carried on. Last year 3,570 indigent persons were examined at the clinic, and 3,064 cases of syphilis and gonorrhea were diagnosed and given a total of 32,315 treatments.

Surgeon General Cumming states that the instruction courses which now are offered will consist of a series of lectures by the director and the consulting specialists attached to the clinic, demonstrations in laboratory and treatment methods, and practical experience in the diagnosis and treatment of syphilis and gonorrhea in various stages through participation in the routine work of the clinic. New classes of not more than 10 physicians will form on the 1st of each month and the course will continue for a minimum of 30 days. Engraved certificates will be presented by the Public Health Service to those who satisfactorily complete the 30-day course.

Fees are not charged for this course of instruction. The individual physician, however, will necessarily provide his own travel expense to and from Hot Springs and his living expenses while there.

Interested physicians should write to the local State health officer or to the Surgeon General, United States Public Health Service, Washington, D. C., for information or application blanks Applications should be indorsed by the State health department in which the applicant resides before being submitted to the United States Public Health Service.

THE "DEADLINESS" OF A DISEASE

The following is quoted from the Vital Statistics Bulletin of the Pennsylvania Department of Health for October, 1926:

"When you say a disease is 'deadly,' just what do you mean? Thus, during the first seven months of this year, measles killed six times as many people as did typhoid fever On the other hand, measles killed only one out of every hundred people it attacked, whereas typhoid killed one out of every five patients Which, then, is the more 'deadly' disease? If you are a physician, typhoid is of course the more deadly; that is, it offers the most unfavorable prognosis. If you are a health official, measles is the most deadly, in that it kills off more people in your jurisdiction.

"Vital statistics should answer both sides of the question, and we present herewith, as a supplement to the 'Mortality Rates' routinely published, 'Case Fatality Rates' for the first seven months of 1926 for the State as a whole. These represent the number of deaths reported for each hundred cases of the particular disease.

Diphtheria	10 5
Measles	1. 1
Scarlet fever	1 3
Typhoid	18 5
Whooping cough	5 8

"These rates are all, of course, a little too high, due to the present incompleteness of case reporting. They are, however, of value in that they show the relative seriousness of these diseases from the patient's or attending physician's viewpoint.

"OUTSTANDING RESULTS

"The chart presented with this issue impressively tells the story of the subjection in Pennsylvania of two dread diseases, tuberculosis and typhoid It is seen that during the period the State department of health has been in existence the death rate from tuberculosis has been reduced 48 per cent while that from typhoid has been reduced 91 per cent. What better argument can be presented for the effectiveness of pure water, pure milk, better sanitation, and better health habits?"

The chart shows that tuberculosis deaths were reduced approximately from 150 to 77 per 100,000 and typhoid fever from 56 to 4.8 per 100,000 during the period 1906 to 1925.

PUBLIC HEALTH ENGINEERING ABSTRACTS

City Authorities Held Responsible for Typhoid. Anon *Canadian Engineer*, vol 50, No. 26, June 29, 1926, pp. 697–698 and 716 (Abstract by Rudolph E. Thompson)

The full text is given of Justice Logie's judgment in case in which the city of Owen Sound, Ontario, the public utilities commission, and the local board of health were sued for damages by a girl who contracted typhoid during an epidemic in September, 1925. The plaintiff was awarded damages of $2,000 with costs Justice Logie stated that the evidence presented was fully convincing that the typhoid was water-borne, and he severely rebuked the civic authorities for gross negligence in disregarding repeated warnings that the water supply was of dangerous quality. Despite instructions from the provincial board of health that steps be taken to insure the safety of the supply and reports from the local representative of the provincial board that the quality of the water was unsatisfactory, chlorination was postponed until it was too late. It was brought out in evidence, brief extracts from which are included, that some time previous to the epidemic an old reservoir was put into service which had been closed on the recommendation of the provincial board of health in 1916, when there was typhoid among the troops quartered in Owen Sound. When this connection between the reservoir and the city supply was closed, the epidemic abated.

Survey shows Relation of Goiter to Drinking Water. Anon. *The Nation's Health,* vol. 8, No 8, August, 1926, pp 557–559. (Abstract by H. N. Old.)

The city of Saginaw, Mich , is taken for this survey of goiter prevalence in school children and the relationship of drinking water In this city examinations of the deep-well water supplies used indicated an average iodine content of 0.31 milligram per gallon, varying from 0 024 to 1.4, while absent in shallow wells

Tables are given showing the analyses of the deep-well waters, and also tables showing the prevalence by schools, and by grades at one school, of thyroid enlargement among the children

The conclusion is reached that this enlargement does not occur among children who use deep-well water regularly, and the evidence seems to indicate quite clearly that (1) there is a definite relation between the incidence of goiter and the kind of drinking water used; (2) those who have used water from deep wells regularly have benefited by its use in both the prevention and decrease of thyroid enlargement; (3) we are led to believe that even the minutest quantity of iodine in drinking water (0.024 milligram per gallon) if regularly used is sufficient to prevent thyroid enlargement

Chlorination in Relation to Factors of Safety for Water Filtration Processes. H. W. Streeter, Sanitary Engineer, United States Public Health Service. *Water Works,* vol 65, No. 9, September, 1926, pp. 439–442. (Abstract by E. A. Reinke.)

This paper is a memorandum based on a survey of 17 water filtration plants on the Ohio River submitted as an appendix to the committee report presented at the conference of State sanitary engineers at Buffalo, N. Y., June, 1926. Tables and charts show the relation between *B. coli* index and frequency with which on individual days it exceeded specified limits; the relation between *B coli* index of raw water and unchlorinated effluent; and assumed factors of safety attributed to chlorination necessary to give a specified chlorinated effluent for certain *B. coli* indices in unchlorinated effluent.

Mr. Streeter suggests as a basis for compromise between those who would demand an unchlorinated effluent conforming to the Treasury Department standard and those who are satisfied with chlorinated effluents meeting the standard, "that instead of taking chlorination as the factor of safety, a definite numerical factor be assigned such that the average *B. coli* index of the chlorinated effluent shall be some specified fraction of the maximum limit prescribed by a given standard of quality, as, for example, the revised Treasury Department standard. Thus, if the factor of safety be five, the required average *B. coli* index of the chlorinated filtered effluent would be not greater than 0.2 per 100 cubic centimeters." After discussing several possible conditions,

Mr. Streeter suggests as a basis for working factors of safety the following table:

Class	Factor of safety	Limiting yearly average B coli index per 100 c c	
		Chlorinated filter effluent	Unchlorinated filter effluent
A	10	0 10	3 2
B	5	20	4 6
C	3	33	5 7

Raw waters would be put in class A, B, or C, depending on the difficulty experienced in treating them

Water Purification in Relation to Stream Pollution.—*Waterworks,* volume 65, No. 9, September, 1926, pp. 447–449. (Abstract by E A. Reinke.)

The paper is the progress report of committee on water supply and purification presented at the conference of State sanitary engineers, Buffalo, N Y., June, 1926.

A survey of 17 municipal water filtration plants "has indicated that the average fully equipped plant of modern design operated efficiently under skilled supervision and treating a water similar in its general character to that of the Ohio River, should be able to produce a chlorinated filter effluent showing an average conformance to the revised Treasury Department *B. Coli* standard when the mean *B. coli* index of the raw water does not exceed approximately 5,000 per 100 cubic centimeters." Modern tendencies may be to rely too much on chlorination, using filtration merely for clarifying water. Efficiency of bacterial removal is not greatly effected by raw water turbidity or changes in season. Most probable numbers of *B. coli* is most satisfactory measurement of bacterial relationships. A more precise and more highly standardized method of enumerating B. coli should be adopted. A definite specification should be made as to the maximum permissible bacterial or *B. coli* content of unchlorinated or chlorinated water, and this will depend upon extent to which chlorination is considered a "factor of safety."

Zoning on Trial Before the United States Supreme Court.—James Metzenbaum. *American City,* volume 35, No. 1, July, 1926, pp. 74–76. (Abstract by George N. McDaniel, jr.)

A zoning ordinance passed by the village of Euclid, Ohio, has been assailed by the Ambler Realty Co. charging that such an ordinance is unconstitutional. The question as to the reasonableness of the Euclid ordinance is, in itself, of negligible importance, but a ruling concurring with the realty company would affect zoning ordinances

all over the country. Several State supreme courts have passed on the validity of zoning ordinances, and at the present their opinions are equally divided The Euclid case will be reargued before the United States Supreme Court this fall.

An Investigation Concerning the Incidence of Lead Poisoning in Motor-Car Painters.—C. Badham (Studies in Industrial Hygiene, No. 6), Report Director General of Public Health, New South Wales for 1924, 90–100 (19 refs.) (Abstracted by E. L. Collis) From *Bulletin of Hygiene*, volume 1, No. 8, August, 1926, page 643 (Abstract by Arthur P Miller.)

"An investigation, during which 100 men exposed to risk of lead poisoning in the motor-car painting trade were examined, is made the text for an unusually interesting discussion of our present knowledge with regard to plumbism. The incidence of lead poisoning was found to be grave; 14 men were classed as clear cases of lead poisoning, 12 as slight cases, and 17 as suspicious, while 11 had other nonoccupational disabilities. The prohibition of lead compounds in the paints used is indicated. A blue line on the gums is not confined to lead exposure, as it has been found in 25 per cent of men receiving injections of bismuth at a venereal-disease clinic, but when due to lead it is a danger signal. Like lead in the urine, it indicates active transportation of lead in the system. The term 'lead absorption' is objected to as a mere euphemism for minor poisoning. Punctate basophilia was found in 18 of the motor-car painters, but was entirely absent among 25 painters using nonlead paints on bedsteads and among men receiving bismuth injections. Thirteen of the 100 had granular casts in their urine, an unusually high proportion, but the group as a whole showed no evidence of blood pressure being unusually high or low. Detailed information is given in tabular form of each examination made."

Relation of Health Departments to Industrial Hygiene.—C. T. Graham-Rogers, M. D. *American Journal of Public Health*, volume 16, No. 2, February, 1926, pages 117–120. (Abstract by A. L. Dopmeyer.)

The first accomplishment desired in industrial hygiene work is coordination with the work of the various agencies in the State and cooperation between State and local authorities. Factors within and without the industry responsible for accidents and health hazards, and remedial measures, are discussed.

Methods for satisfactory cooperation between various agencies are suggested, and a plea is made for better observance of the laws and simplification of inspection work by elimination of duplication.

DEATHS DURING WEEK ENDED OCTOBER 30, 1926

Summary of information received by telegraph from industrial insurance companies for week ended October 30, 1926, and corresponding week of 1925. (From the Weekly Health Index, November 3, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Oct. 30, 1926	Corresponding week, 1925
Policies in force	65,729,006	61,864,119
Number of death claims	11,573	10,672
Death claims per 1,000 policies in force, annual rate	9.2	9.0

Deaths from all causes in certain large cities of the United States during the week ended October 30, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, November 3, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Oct. 30, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Oct. 30, 1926 [2]
	Total deaths	Death rate [1]		Week ended Oct. 30, 1926	Corresponding week, 1925	
Total (65 cities)	6,759	12.2	12.5	802	741	[3] 65
Akron	30			5	2	54
Albany [4]	41	18.0	13.3	6	2	124
Atlanta	85			9	11	
White	41			3	5	
Colored	44	(5)		6	6	
Baltimore [4]	190	12.3	13.6	13	25	40
White	142			10	17	38
Colored	48	(5)		3	8	48
Birmingham	70	17.3	18.8	15	10	
White	34			4	5	
Colored	36	(5)		11	5	
Boston	222	14.7	13.9	43	25	120
Bridgeport	41			6	3	102
Buffalo	148	14.2	11.4	7	21	29
Cambridge	25	10.7	8.7	2	3	36
Camden	21	8.4	15.0	3	3	50
Canton	24	11.4	8.3	3	3	66
Chicago [4]	639	10.9	11.3	57	67	50
Cincinnati	119	15.1	17.6	14	9	87
Cleveland	202	11.0	10.2	26	20	68
Columbus	80	14.6	13.6	9	12	84
Dallas	47	12.3	14.3	6	12	
White	37			6	11	
Colored	10	(5)		0	1	
Dayton	43	12.7	12.1	10	4	164
Denver	77	14.1	11.5	9	6	
Des Moines	26	9.3	14.0	5	4	84
Detroit	269	10.9	10.2	42	35	68
Duluth	18	8.3	11.3	2	1	46
El Paso	27	12.9	13.4	9	3	
Erie	35			3	1	50
Fall River [4]	32	12.7	10.5	7	3	110
Flint	26	9.9	8.8	4	1	68
Fort Worth	18	5.2	6.8	3	3	
White	14			3	2	
Colored	2	(5)		0	1	
Grand Rapids	35	11.7	16.6	7	7	100
Houston	42			6	10	
White	25			3	6	
Colored	17	(5)		3	4	
Indianapolis	103	14.6	15.3	10	4	70
White	85			7		61
Colored	18	(5)		3		172
Jersey City	71	11.6	10.8	10	11	76
Kansas City, Kans.	22	9.8	14.8	7	2	136
White	19			7	2	156
Colored	3	(5)		0	0	0
Kansas City, Mo.	99	13.8	12.9	9	15	
Los Angeles	210			32	19	89

(Footnotes at end of table)

Deaths from all causes in certain large cities of the United States during the week ended October 30, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued.

City	Week ended Oct 30, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Oct 30, 1926 [2]
	Total deaths	Death rate [1]		Week ended Oct. 30, 1926	Corresponding week, 1925	
Louisville	75	12.6	13.3	9	6	77
White	59			9	5	87
Colored	16	(5)		0	1	0
Lowell	30			4	1	77
Lynn	14	7.0	10.1	2	1	53
Memphis	63	18.6	18.5	11	8	
White	26			1	4	
Colored	37	(5)		10	4	
Milwaukee	87	8.8	11.3	11	19	52
Minneapolis	82	9.9	11.8	4	7	22
Nashville [4]	49	18.6	20.7	7	2	
White	32			6	1	
Colored	17	(5)		1	1	
New Bedford	20			4	8	69
New Haven	41	11.7	11.1	5	5	68
New Orleans	143	17.8	14.6	26	16	
White	84			16	8	
Colored	59	(5)		10	8	
New York	1,296	11.4	12.4	157	143	64
Bronx Borough	167	9.7	10.3	14	14	47
Brooklyn Borough	441	10.3	10.5	61	51	62
Manhattan Borough	536	14.9	16.6	64	67	71
Queens Borough	104	6.7	8.9	12	9	55
Richmond Borough	48	17.5	13.6	6	2	105
Newark, N. J	83	9.4	12.0	14	14	67
Norfolk	33	9.9	11.7	5	7	101
White	15			1	3	33
Colored	18	(5)		4	4	212
Oakland	59	11.8	9.9	3	8	35
Oklahoma City	23			4	6	
Omaha	53	12.8	11.8	4	6	42
Paterson	25	9.1	11.0	0	3	0
Philadelphia	496	12.9	13.7	62	51	83
Pittsburgh	156	12.8	14.4	19	27	63
Portland, Oreg	60			4	4	40
Providence	68	12.9	12.3	9	5	75
Richmond	43	11.9	12.3	12	6	149
White	19			7	4	136
Colored	24	(5)		5	2	173
Rochester	68	11.0	10.5	5	13	40
St Louis	220	13.8	13.6	22	9	
St. Paul	58	12.2	12.9	4	4	35
Salt Lake City [4]	40	15.7	12.7	5	2	76
San Antonio	45	11.4	14.0	9	10	
San Diego	48	22.8	13.8	2	1	42
San Francisco	160	14.7	11.3	9	3	54
Schenectady	21	11.8	10.1	0	1	0
Seattle	72			5	2	48
Somerville	25	13.0	16.8	1	2	28
Spokane	26	12.4	13.9	0	3	0
Springfield, Mass	38	13.7	12.5	4	4	62
Syracuse	49	13.9	14.6	6	6	76
Toledo	73	12.9	9.4	11	5	100
Trenton	30	11.7	13.8	3	3	51
Utica	38	19.2	14.9	1	0	23
Washington, D. C	135	13.3	13.7	10	15	57
White	77			5	9	42
Colored	58	(5)		5	6	91
Waterbury	16			1	6	24
Wilmington, Del	30	12.6	11.5	2	2	44
Worcester	43	11.6	16.7	6	8	72
Yonkers	28	12.6	8.7	1	2	23
Youngstown	26	8.2	8.8	3	3	38

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births Cities left blank are not in registration area for births.

[3] Data for 63 cities.

[4] Deaths for week ended Friday, Oct 29, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population. Atlanta, 31, Baltimore, 15, Birmingham, 39, Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11, Kansas City, Kans, 14, Louisville, 17; Memphis, 38, Nashville, 30, New Orleans, 26, Norfolk, 38, Richmond, 32, and Washington, D C, 25.

DEATHS DURING WEEK ENDED NOVEMBER 6, 1926

Summary of information received by telegraph from industrial insurance companies for week ended November 6, 1926, and corresponding week of 1925 (From the Weekly Health Index, November 10, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Nov 6, 1926	Corresponding week, 1925
Policies in force	64,674,006	61,998,918
Number of death claims	10,599	10,005
Death claims per 1,000 policies in force, annual rate	8.5	8.4

Deaths from all causes in certain large cities of the United States during the week ended November 6, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, November 10, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Nov. 6, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Nov 6, 1926 [2]
	Total deaths	Death rate [1]		Week ended Nov 6, 1926	Corresponding week, 1925	
Total (66 cities)	6,566	11.8	12.8	712	732	[illegible]
Akron	36			7	3	75
Albany [4]	45	19.7	15.9	1	2	21
Atlanta	73			7	16	
White	37			2	10	
Colored	36	(5)		5	6	
Baltimore [4]	193	12.5	15.0	23	20	70
White	143			17	12	64
Colored	50	(5)		6	8	96
Birmingham	47	11.6	19.5	7	10	
White	29			5	5	
Colored	18	(5)		2	5	
Boston	185	12.3	14.3	22	20	61
Bridgeport	26			2	2	34
Buffalo	143	13.7	16.4	17	30	71
Cambridge	27	11.5	12.6	2	2	36
Camden	35	13.9	15.0	4	6	67
Canton	21	10.0	11.3	2	3	44
Chicago [4]	601	10.3	11.4	62	62	54
Cincinnati	128	16.2	17.2	11	9	69
Cleveland	190	10.3	9.7	18	23	47
Columbus	79	14.5	13.4	8	5	75
Dallas	46	12.0	16.7	7	8	
White	35			6	6	
Colored	11	(5)		1	2	
Dayton	36	10.6	8.7	2	1	33
Denver	79	14.5	14.3	6	3	
Des Moines	20	7.1	11.1	2	2	33
Detroit	283	11.4	11.3	46	37	75
Duluth	24	11.1	7.1	2	2	46
El Paso	28	13.4	12.9	7	4	
Erie	28			4	4	78
Fall River [4]	28	11.1	10.1	4	6	63
Flint	24	9.1	6.8	7	3	110
Fort Worth	35	11.5	9.9	5	1	
White	27			5	1	
Colored	8	(5)		0	0	
Grand Rapids	34	11.4	8.5	4	2	57
Houston	48			6	6	
White	37			6	3	
Colored	11	(5)		0	3	
Indianapolis	87	12.4	14.0	10	8	76
White	73			9		78
Colored	14	(5)		1		57
Jersey City	59	9.7	11.2	7	7	53
Kansas City, Kans	35	15.6	20.2	2	6	39
White	27			1	4	22
Colored	8	(5)		1	2	152
Kansas City, Mo	92	12.8	14.3	9	6	
Los Angeles	225			23	19	64

(Footnotes at end of table)

Deaths from all causes in certain large cities of the United States during the week ended November 6, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued.

City	Week ended Nov 6, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate week ended Nov. 6, 1926 [2]
	Total deaths	Death rate [1]		Week ended Nov 6, 1926	Corresponding week, 1925	
Louisville	75	12 6	15 7	6	10	51
White	56			5	9	49
Colored	19	(5)		1	1	70
Lowell	25			1	8	19
Lynn	22	11 0	10 6	0	1	0
Memphis	59	17 4	22 7	8	8	
White	28			4	5	
Colored	31	(5)		4	3	
Milwaukee	100	10 1	11 2	14	9	66
Minneapolis	83	10.0	12 0	4	11	22
Nashville [4]	65	24 7	16 5	14	7	
White	44			10	5	
Colored	21	(5)		4	2	
New Bedford	26			1	1	17
New Haven	38	10 9	9 9	4	3	55
New Orleans	153	19 0	18 6	18	15	
White	90			10	9	
Colored	63	(5)		8	6	
New York	1,260	11 1	12 1	109	151	44
Bronx boro	140	8.1	8 3	16	11	53
Brooklyn boro	456	10 6	11 1	42	57	43
Manhattan boro	514	14.3	15 8	43	67	48
Queens boro	113	7 7	8 5	5	13	23
Richmond boro	37	13 5	17.0	3	3	53
Newark, N. J	91	10 3	10 3	8	6	38
Norfolk	36	10.8	10 5	6	3	121
White	20			3	0	98
Colored	16	(5)		3	3	159
Oakland	55	11 0	9.2	6	3	70
Oklahoma City	32			5	4	
Omaha	43	10 4	12 6	5	5	53
Paterson	34	12.4	9 6	2	0	34
Philadelphia	478	13 4	11 4	45	45	60
Pittsburgh	125	10 2	16 5	22	29	73
Portland, Oreg	66			4	3	40
Providence	55	10 4	15 2	6	8	50
Richmond	68	18 8	15 9	9	10	112
White	41			4	4	78
Colored	27	(5)		5	6	1[illegible]
Rochester	64	10 4	11 5	13	9	10[illegible]
St Louis	206	12 9	16 0	25	13	
St Paul	60	12 6	10 6	5	1	44
Salt Lake City [4]	33	12 9	11 5	7	5	10[illegible]
San Antonio	44	11 2	12 9	6	10	
San Diego	30	14 2	16 2	0	0	[illegible]
San Francisco	115	10 6	13 3	7	15	42
Schenectady	11	6 2	10 7	3	1	86
Seattle	73			3	1	29
Somerville	33	17 2	12 6	5	2	141
Spokane	29	13 9	12 4	2	1	46
Springfield, Mass	26	9 3	13 6	4	4	62
Syracuse	41	11 6	10 9	6	7	76
Tacoma	24	11 8	15 5	4	3	95
Toledo	89	15 8	12.7	10	6	96
Trenton	40	15 6	18 6	6	6	102
Utica	27	13 7	19 5	3	1	68
Washington, D. C	131	12 9	15.5	11	17	63
White	95			8	11	67
Colored	36	(5)		3	6	55
Waterbury	13			1	3	24
Wilmington, Del	26	10.9	13 7	1	6	22
Worcester	41	11 1	12 6	8	6	96
Yonkers	16	7 2	11.5	1	0	23
Youngstown	36	11 4	13.7	2	7	25

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births. Cities left blank are not in registration area for births.

[3] Data for 64 cities.

[4] Deaths for week ended Friday, Nov. 5, 1926.

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta, 31; Baltimore, 15, Birmingham, 39, Dallas, 15; Fort Worth, 14; Houston, 25, Indianapolis, 11, Kansas City, Kans., 14; Louisville, 17; Memphis, 38, Nashville, 30; New Orleans, 26, Norfolk, 38; Richmond, 32; and Washington, D C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended November 13, 1926

ALABAMA

	Cases
Chicken pox	13
Dengue	2
Diphtheria	66
Influenza	64
Malaria	76
Measles	6
Mumps	8
Pellagra	6
Pneumonia	48
Scarlet fever	27
Smallpox	4
Tuberculosis	20
Typhoid fever	22
Whooping cough	22

ARIZONA

Chicken pox	2
Diphtheria	7
Measles	37
Mumps	25
Scarlet fever	18
Trachoma	1
Tuberculosis	35
Typhoid fever	1
Whooping cough	10

ARKANSAS

Chicken pox	16
Diphtheria	12
Hookworm disease	1
Influenza	117
Malaria	165
Measles	4
Mumps	2
Ophthalmia neonatorum	1
Paratyphoid fever	2
Pellagra	10
Poliomyelitis	1
Scarlet fever	17
Smallpox	2
Trachoma	1
Tuberculosis	16
Typhoid fever	18
Whooping cough	46

CALIFORNIA

	Cases
Cerebrospinal meningitis—Oakland	1
Chicken pox	244
Diphtheria	156
Influenza	21
Jaundice (epidemic)	2
Measles	644
Mumps	133
Poliomyelitis	
Orange	1
Redondo	1
Scarlet fever	259
Smallpox	
Mendocino County	32
Scattering	10
Tuberculosis	140
Typhoid fever	17
Whooping cough	77

COLORADO

Chicken pox	16
Diphtheria	22
German measles	1
Hookworm disease	1
Impetigo contagiosa	1
Measles	12
Mumps	6
Pneumonia	2
Scarlet fever	76
Smallpox	39
Tuberculosis	19
Typhoid fever	8
Vincent's angina	1
Whooping cough	2

CONNECTICUT

Chicken pox	118
Conjunctivitis (infectious)	1
Diphtheria	24
German measles	1
Influenza	2
Measles	9
Mumps	3
Pneumonia (broncho)	12

CONNECTICUT—continued

	Cases
Pneumonia (lobar)	26
Scarlet fever	65
Tuberculosis (all forms)	27
Typhoid fever	4
Whooping cough	52

DELAWARE

Chicken pox	2
Diphtheria	4
Measles	1
Pneumonia	1
Scarlet fever	24
Tuberculosis	2
Typhoid fever	3
Whooping cough	6

FLORIDA

Chicken pox	2
Diphtheria	87
Hookworm disease	33
Influenza	2
Malaria	4
Measles	1
Pneumonia	3
Scarlet fever	13
Smallpox	3
Tetanus	1
Tuberculosis	14
Typhoid fever	15
Whooping cough	2

GEORGIA

Chicken pox	2
Conjunctivitis (infectious)	1
Diphtheria	128
Dysentery	3
Hookworm disease	5
Influenza	83
Malaria	42
Measles	3
Mumps	2
Paratyphoid fever	1
Pellagra	1
Pneumonia	36
Poliomyelitis	4
Scarlet fever	22
Septic sore throat	9
Smallpox	9
Tuberculosis	12
Tularaemia	1
Typhoid fever	28
Whooping cough	16

IDAHO

Chicken pox	6
Diphtheria	3
Measles	32
Scarlet fever	43
Typhoid fever	1

ILLINOIS

Cerebrospinal meningitis	
Cook County	2
Kane County	1
Chicken pox	408
Diphtheria	143
Influenza	14

ILLINOIS—continued

	Cases
Measles	306
Mumps	45
Pneumonia	183
Poliomyelitis	
Macon County	2
Madison County	1
McHenry County	1
Scarlet fever	273
Smallpox	5
Tuberculosis	324
Typhoid fever	40
Whooping cough	220

INDIANA

Anthrax—Gary	2
Chicken pox	139
Diphtheria	107
Influenza	20
Measles	28
Pneumonia	11
Scarlet fever	185
Smallpox	72
Tuberculosis	44
Typhoid fever	21
Whooping cough	129

IOWA

Cerebrospinal meningitis	1
Chicken pox	62
Diphtheria	23
Measles	12
Mumps	9
Pneumonia	5
Scarlet fever	42
Smallpox	8
Trachoma	1
Tuberculosis	10
Typhoid fever	5
Whooping cough	8

KANSAS

Chicken pox	122
Diphtheria	20
German measles	1
Influenza	4
Measles	120
Mumps	27
Pneumonia	25
Poliomyelitis—Ash Grove	1
Scarlet fever	70
Smallpox	5
Tuberculosis	29
Typhoid fever	16
Whooping cough	38

LOUISIANA

Cerebrospinal meningitis	2
Diphtheria	53
Hookworm disease	7
Influenza	14
Malaria	20
Pneumonia	23
Scarlet fever	17
Smallpox	2
Tuberculosis	66
Typhoid fever	16

MAINE

	Cases
Chicken pox	92
Diphtheria	3
German measles	1
Measles	107
Mumps	3
Pneumonia	9
Poliomyelitis	3
Scarlet fever	42
Tuberculosis	10
Typhoid fever	3
Whooping cough	13

MARYLAND [1]

	Cases
Cerebrospinal meningitis	2
Chicken pox	62
Diphtheria	54
Dysentery	6
German measles	1
Influenza	13
Lethargic encephalitis	4
Measles	19
Mumps	13
Paratyphoid fever	1
Pneumonia (broncho)	32
Pneumonia (lobar)	28
Scarlet fever	52
Septic sore throat	2
Tuberculosis	57
Typhoid fever	24
Whooping cough	74

MASSACHUSETTS

	Cases
Chicken pox	289
Conjunctivitis (suppurative)	9
Diphtheria	107
German measles	9
Influenza	15
Malaria	1
Measles	29
Mumps	139
Ophthalmia neonatorum	28
Pneumonia (lobar)	57
Poliomyelitis	7
Scarlet fever	251
Septic sore throat	2
Trachoma	2
Trichinosis	1
Tuberculosis (pulmonary)	91
Tuberculosis (other forms)	21
Typhoid fever	8
Whooping cough	104

MICHIGAN

	Cases
Diphtheria	151
Measles	53
Pneumonia	78
Scarlet fever	207
Smallpox	33
Tuberculosis	31
Typhoid fever	25
Whooping cough	128

MINNESOTA

	Cases
Actinomycosis	1
Chicken pox	222
Diphtheria	88

MINNESOTA—continued

	Cases
Dysentery	1
Influenza	2
Measles	119
Pneumonia	8
Scarlet fever	224
Smallpox	2
Tuberculosis	41
Typhoid fever	3
Whooping cough	27

MISSISSIPPI

	Cases
Diphtheria	41
Scarlet fever	17
Smallpox	1
Typhoid fever	16

MISSOURI

(Exclusive of Kansas City)

	Cases
Cerebrospinal meningitis	1
Chicken pox	35
Diphtheria	63
Epidemic sore throat	3
Influenza	10
Measles	19
Mumps	1
Ophthalmia neonatorum	1
Pneumonia	1
Scarlet fever	100
Smallpox	1
Trachoma	2
Tuberculosis	34
Typhoid fever	38
Whooping cough	23

MONTANA

	Cases
Chicken pox	40
Diphtheria	[illegible]
Measles	124
Scarlet fever	97
Smallpox	1
Typhoid fever	7
Whooping cough	4

NEBRASKA

	Cases
Chicken pox	70
Diphtheria	8
Measles	4
Mumps	11
Poliomyelitis	1
Scarlet fever	25
Smallpox	7
Tuberculosis	1
Typhoid fever	2
Whooping cough	16

NEW JERSEY

	Cases
Cerebrospinal meningitis	2
Chicken pox	130
Diphtheria	125
Influenza	10
Malaria	1
Measles	32
Paratyphoid fever	1
Pneumonia	107
Poliomyelitis	2
Scarlet fever	144
Typhoid fever	29
Whooping cough	124

[1] Week ended Friday

NEW MEXICO

	Cases
Chicken pox	4
Diphtheria	1
Pellagra	1
Pneumonia	2
Scarlet fever	28
Tuberculosis	21
Typhoid fever	4
Whooping cough	3

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	1
Chicken pox	419
Diphtheria	78
Dysentery	1
German measles	48
Influenza	3
Malaria	2
Measles	592
Mumps	171
Paratyphoid fever	1
Pneumonia	205
Poliomyelitis	11
Scarlet fever	136
Septic sore throat	1
Smallpox	44
Typhoid fever	46
Vincent's angina	22
Whooping cough	256

NORTH CAROLINA

Chicken pox	50
Diphtheria	184
German measles	3
Malaria	4
Measles	6
Poliomyelitis	2
Scarlet fever	104
Septic sore throat	1
Smallpox	22
Typhoid fever	20
Whooping cough	259

OREGON

Chicken pox	38
Diphtheria	9
Influenza	19
Measles	10
Pneumonia	[1] 11
Scarlet fever	58
Smallpox:	
Josephine County	10
Scattering	8
Tuberculosis	24
Typhoid fever	5
Whooping cough	4

PENNSYLVANIA

Cerebrospinal meningitis—Philadelphia	1
Chicken pox	589
Diphtheria	226
German measles	9
Impetigo contagiosa	20
Lethargic encephalitis—Philadelphia	1

[1] Deaths.

PENNSYLVANIA—continued

	Cases
Measles	561
Mumps	62
Opthalmia neonatorum—Philadelphia	2
Pellagra—Philadelphia	1
Pneumonia	31
Poliomyelitis	
Baden	1
Clearfield County	1
Rabies—Pittsburgh	1
Scabies	8
Scarlet fever	412
Trachoma—Pittsburgh	1
Tuberculosis	113
Typhoid fever	54
Whooping cough	277

RHODE ISLAND

Chicken pox	2
Diphtheria	10
Mumps	1
Ophthalmia neonatorum	2
Pneumonia	1
Scarlet fever	17
Tuberculosis	8
Whooping cough	2

SOUTH DAKOTA

Chicken pox	16
Diphtheria	4
Measles	31
Mumps	8
Pneumonia	3
Poliomyelitis	1
Scarlet fever	35
Smallpox	1
Tuberculosis	3
Typhoid fever	2
Whooping cough	7

TENNESSEE

Cerebrospinal meningitis—Memphis	1
Chicken pox	15
Diphtheria	109
Dysentery	6
Influenza	29
Malaria	7
Measles	19
Ophthalmia neonatorum	1
Paratyphoid fever	1
Pellagra	6
Pneumonia	31
Rabies	3
Scarlet fever	82
Smallpox	2
Tetanus	1
Tuberculosis	35
Typhoid fever	81
Whooping cough	50

TEXAS

Cerebrospinal meningitis	1
Chicken pox	4
Dengue	10
Diphtheria	48

TEXAS—continued

	Cases
Dysentery	10
Mumps	3
Pellagra	5
Pneumonia	1
Scarlet fever	34
Smallpox	3
Tuberculosis	14
Typhoid fever	9
Whooping cough	5

UTAH

Chicken pox	41
Diphtheria	13
German measles	1
Influenza	4
Measles	221
Mumps	2
Pneumonia	9
Scarlet fever	24
Trachoma—Eureka	1
Typhoid fever	1
Whooping cough	7

VERMONT

Chicken pox	33
Diphtheria	1
Measles	124
Mumps	10
Scarlet fever	2
Whooping cough	47

VIRGINIA

Cerebrospinal meningitis—Prince Edward County	1

WASHINGTON

Chicken pox	77
Diphtheria	28
German measles	5
Measles	42
Mumps	22
Pneumonia	2
Scarlet fever	64
Smallpox	8
Tuberculosis	2
Typhoid fever	10
Whooping cough	8

WEST VIRGINIA

	Cases
Chicken pox	76
Diphtheria	41
Influenza	11
Measles	7
Scarlet fever	63
Smallpox	1
Tuberculosis	16
Typhoid fever	28
Whooping cough	72

WISCONSIN

Milwaukee	
Chicken pox	99
Diphtheria	13
German measles	1
Measles	6
Mumps	38
Pneumonia	15
Scarlet fever	13
Tuberculosis	15
Typhoid fever	2
Whooping cough	60
Scattering	
Cerebrospinal meningitis	1
Chicken pox	171
Diphtheria	31
German measles	2
Influenza	27
Measles	238
Mumps	18
Pneumonia	9
Poliomyelitis	3
Scarlet fever	114
Smallpox	4
Tuberculosis	19
Typhoid fever	6
Whooping cough	162

WYOMING

Chicken pox	6
Diphtheria	1
Measles	14
Poliomyelitis—Hot Springs County	1
Scarlet fever	13
Smallpox	1
Typhoid fever	1
Whooping cough	5

Reports for Week Ended November 6, 1926

DISTRICT OF COLUMBIA

	Cases
Cerebrospinal meningitis	1
Chicken pox	5
Diphtheria	36
Measles	1
Pellagra	1
Pneumonia	18
Poliomyelitis	1
Scarlet fever	6
Tuberculosis	21
Typhoid fever	2
Whooping cough	1

NORTH DAKOTA

	Cases
Chicken pox	21
Diphtheria	11
Measles	44
Mumps	5
Pneumonia	1
Scarlet fever	62
Smallpox	9
Trachoma	2
Tuberculosis	2
Typhoid fever	1
Whooping cough	4

SOUTH CAROLINA	Cases
Chicken pox	25
Dengue	10
Diphtheria	123
Hookworm disease	29
Influenza	524
Malaria	461
Measles	2
Paratyphoid fever	2

SOUTH CAROLINA—continued	Cases
Pellagra	43
Poliomyelitis	2
Scarlet fever	26
Smallpox	4
Tuberculosis	48
Typhoid fever	51
Whooping cough	27

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever [1]
September, 1926										
Delaware	0	8	1	3			3	19	0	10
Oregon	1	34	39	5	27		4	87	33	42
Virginia	4	280	513	259	138	15	10	185	8	294
October, 1926										
Arizona	1	14	0		72		0	35	0	11
Connecticut	3	108	13	2	62		9	139	0	20
Georgia		393	214	502	15	13	1	92	30	305
Vermont	0	9	0		386		1	12	0	6

[1] Including paratyphoid fever.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended October 30, 1926, 37 States reported 2,290 cases of diphtheria. For the week ended October 31, 1925, the same States reported 1,904 cases of this disease. Ninety-nine cities, situated in all parts of the country and having an aggregate population of more than 29,800,000, reported 1,221 cases of diphtheria for the week ended October 30, 1926. Last year for the corresponding week they reported 984 cases The estimated expectancy for these cities was 1,256 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-six States reported 2,119 cases of measles for the week ended October 30, 1926, and 1,312 cases of this disease for the week ended October 31, 1925. Ninety-nine cities reported 352 cases of measles for the week this year, and 583 cases last year.

Poliomyelitis.—The health officers of 37 States reported 60 cases of poliomyelitis for the week ended October 30, 1926. The same States reported 113 cases for the week ended October 31, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-seven States—this year, 2,543 cases; last year, 2,163 cases; 99 cities—this year, 966 cases; last year, 869 cases; estimated expectancy, 757 cases.

Smallpox—For the week ended October 30, 1926, 37 States reported 197 cases of smallpox. Last year for the corresponding week they reported 208 cases. Ninety-nine cities reported smallpox for the week as follows: 1926, 17 cases; 1925, 56 cases, estimated expectancy, 36 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—Seven hundred and seventy-seven cases of typhoid fever were reported for the week ended October 30, 1926, by 37 States. For the corresponding week of 1925, the same States reported 831 cases of this disease. Ninety-nine cities reported 159 cases of typhoid fever for the week this year and 140 cases for the corresponding week last year. The estimated expectancy for these cities was 136 cases

Influenza and pneumonia—Deaths from influenza and pneumonia were reported for the week by 93 cities, with a population of more than 29,150,000, as follows: 1926, 598 deaths; 1925, 691 deaths

City reports for week ended October 30, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases, reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75 333	5	2	0	0	0	0	0	1
New Hampshire									
Concord	22,546	0	1	0	0	0	0	0	0
Manchester	83,097	0	4	0	0	0	0	0	4
Vermont									
Barre	10,008	3	0	1	0	0	0	0	2
Burlington	24,089	1	0	0	0	0	0	0	1
Massachusetts									
Boston	779,620	27	58	17	3	1	6	25	18
Fall River	128,993	1	4	4	0	0	0	2	4
Springfield	142,065	1	4	2	0	0	0	0	1
Worcester	190,757	24	7	4	0	1	0	0	1
Rhode Island									
Pawtucket	69,760	4	1	0	0	0	0	0	0
Providence	267,918	0	7	12	0	1	1	0	5
Connecticut.									
Bridgeport	(1)	0	10	4	1	0	2	1	3
Hartford	160,197	1	8	1	0	0	0	2	0
New Haven	178,927	16	3	0	0	0	1	0	7

[1] No estimate made

City reports for week ended October 30, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases, reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MIDDLE ATLANTIC									
New York									
Buffalo	538, 016	33	24	16	2	0	2	1	11
New York	5, 873, 356	67	161	163	52	7	13	27	113
Rochester	316. 786	3	13	4	-------	0	0	0	5
Syracuse	182, 003	0	11	0	-------	0	2	2	3
New Jersey									
Camden	128, 642	2	8	13	1	1	0	0	1
Newark	452, 513	13	15	8	0	0	2	5	2
Trenton	132, 020	1	5	1	0	0	0	0	2
Pennsylvania									
Philadelphia	1, 979, 364	54	73	50	-------	4	5	4	44
Pittsburgh	631, 563	43	36	22	-------	4	2	3	21
Reading	112, 707	10	5	0	-------	0	1	0	1
Scranton	142, 266	2	5	4	-------	0	1	0	2
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409, 333	4	21	11	0	4	2	5	7
Cleveland	936, 485	23	47	81	0	2	6	0	23
Columbus	279, 836	3	6	24	0	0	0	0	6
Toledo	287, 380	79	14	6	0	1	1	0	4
Indiana:									
Fort Wayne	97, 846	1	3	4	0	0	0	0	1
Indianapolis	358, 819	40	14	31	0	0	1	1	13
South Bend	80, 091	2	3	1	0	0	1	0	0
Terre Haute	71, 071	4	3	2	0	0	0	0	0
Illinois									
Chicago	2, 995, 239	73	149	63	6	7	69	17	38
Peoria	81, 564	3	2	0	0	0	71	3	1
Springfield	63, 923	3	3	4	1	1	8	0	3
Michigan:									
Detroit	1, 245, 824	42	67	107	4	6	4	1	19
Flint	130, 316	17	13	3	0	0	1	0	4
Grand Rapids	153, 698	7	8	1	0	0	0	0	1
Wisconsin									
Kenosha	50, 891	0	2	0	0	0	0	1	0
Madison	46, 385	7	1	0	0	0	0	1	0
Milwaukee	509, 192	-------	30	-------	-------	-------	-------	-------	-------
Racine	67, 707	16	3	2	0	0	2	1	1
Superior	39, 671	0	1	0	0	0	0	0	1
WEST NORTH CENTRAL									
Minnesota:									
Duluth	110, 502	5	4	3	0	0	29	0	0
Minneapolis	425, 435	89	31	42	0	0	1	0	6
St. Paul	246, 001	19	21	9	0	1	6	0	7
Iowa									
Davenport	52, 469	0	2	1	0	-------	2	0	-------
Sioux City	76, 411	3	2	5	0	-------	1	1	-------
Waterloo	36, 771	43	1	0	0	-------	0	0	-------
Missouri:									
Kansas City	367, 481	14	16	8	0	0	0	4	10
St. Joseph	78, 342	0	4	0	0	0	0	0	2
St. Louis	821, 543	19	53	49	0	0	2	0	-------
North Dakota									
Fargo	26, 403	11	0	1	0	0	0	2	0
South Dakota:									
Aberdeen	15, 036	2	0	1	0	-------	1	0	-------
Sioux Falls	30, 127	1	1	0	0	-------	0	0	-------
Nebraska									
Omaha	211, 768	3	11	13	0	0	1	1	4
Kansas:									
Topeka	55, 411	12	2	0	0	0	0	0	0
Wichita	88, 367	0	6	1	0	0	2	0	1

City reports for week ended October 30, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	1	4	5	0	0	0	0	3
Maryland									
Baltimore	796,296	22	29	17	3	2	1	4	11
Cumberland	33,741	1	1	5	0	1	1	0	0
Frederick	12,035	0	0	2	0	0	0	0	0
District of Columbia									
Washington	497,906	3	18	41	2	3	0	0	12
Virginia									
Lynchburg	30,395	1	3	5	0	0	1	0	1
Norfolk	(1)	6	4	3	0	0	0	2	5
Richmond	186,403	4	22	47	1	3	0	0	2
Roanoke	58,208	0	5	6	0	1	0	0	3
West Virginia									
Charleston	49,019	0	4	2	1	0	0	0	0
Huntington	63,485	0	4	7	0		0	0	
Wheeling	56,208	7	3	3	0	0	0	0	1
North Carolina									
Raleigh	30,371	0	4	1	0	0	0	0	1
Wilmington	37,061	6	1	2	0	0	0	0	2
Winston-Salem	69,031	0	4	5	0	0	1	0	1
South Carolina									
Charleston	73,125	0	2	2	20	0	0	0	2
Columbia	41,225	0	3	4	0	0	0	0	0
Greenville	27,311	0	1	2	0	0	0	0	0
Georgia									
Atlanta	(1)	4	11	25	13	0	0	0	8
Brunswick	16,809	0	1	0	0	0	0	2	1
Savannah	93,134	0	4	0	9	1	1	0	4
Florida									
Miami	69,754	0		8	0	0	0	0	1
St Petersburg	26,847		0			0			0
Tampa	94,743	2	1	3	0	0	0	0	0
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	2	3	28	0	0	0	0	1
Louisville	305,935	3	13	7	1	0	0	0	11
Tennessee									
Memphis	174,533	4	15	8	0	1	0	0	7
Nashville	136,220	0	4	18	0	1	1	0	0
Alabama									
Birmingham	205,670	0	7	3	4	0	3	1	6
Mobile	65,955	0	2	3	0	0	0	0	1
Montgomery	46,481	0	3	7	2	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	1	1	0		0	0	
Little Rock	74,216	0	3	0	0	1	0	0	3
Louisiana									
New Orleans	414,493	0	11	11	1	1	0	0	8
Shreveport	57,857	0	1	10	0	0	0	0	2
Oklahoma									
Oklahoma City	(1)	0	4	3	0	1	0	0	2
Texas									
Dallas	194,450	0	12	41	5	3	0	0	2
Galveston	48,375	0	1	1	0	0	0	0	0
Houston	164,954	0	5	6	0	1	0	0	4
San Antonio	198,069	0	2	7	0	0	0	0	1
MOUNTAIN									
Montana:									
Billings	17,971	0	0	0	0	0	0	0	1
Great Falls	29,883	55	1	0	0	0	0	0	2
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	3	1	0	0	0	0	1	0
Idaho									
Boise	23,042	0	0	0	0	0	0	0	0

[1] No estimate made

City reports for week ended October 30, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MOUNTAIN—continued									
Colorado									
Denver	280,911	7	15	13	--------	0	1	1	5
Pueblo	43,787	6	6	0	0	1	0	0	2
New Mexico									
Albuquerque	21,000	0	1	0	0	0	0	0	1
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	2
Utah									
Salt Lake City	130,948	24	4	4	0	0	42	0	9
Nevada									
Reno	12,665	0	0	0	0	0	0	0	1
PACIFIC									
Washington.									
Seattle	(1)	28	7	11	0	--------	3	21	--------
Spokane	108,897	29	4	1	0	--------	26	0	--------
Tacoma	104,455	8	3	10	0	0	0	2	2
Oregon:									
Portland	282,383	9	10	9	1	0	14	0	6
California									
Los Angeles	(1)	14	37	40	7	1	5	1	18
Sacramento	72,260	2	2	3	0	0	10	3	1
San Francisco	557,530	31	19	11	1	1	83	13	4

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine											
Portland	0	0	0	0	0	0	1	1	0	0	26
New Hampshire											
Concord	0	1	0	0	0	0	0	0	0	0	13
Manchester	1	0	0	0	0	0	0	0	0	0	12
Vermont:											
Barre	0	0	0	0	0	1	0	0	0	1	4
Burlington	1	0	0	0	0	0	0	0	0	5	6
Massachusetts											
Boston	31	63	0	0	0	16	3	1	2	17	222
Fall River	2	4	0	0	0	3	0	0	0	6	32
Springfield	6	2	0	0	0	2	0	1	1	0	39
Worcester	9	18	0	0	0	2	0	0	0	5	--------
Rhode Island:											
Pawtucket	0	0	0	0	0	0	0	0	0	0	9
Providence	4	6	0	0	0	2	1	1	0	3	68
Connecticut:											
Bridgeport	3	4	0	0	0	1	1	0	0	0	41
Hartford	4	5	0	0	0	1	0	1	1	5	41
New Haven	5	1	0	0	0	3	2	0	0	0	41
MIDDLE ATLANTIC											
New York:											
Buffalo	16	17	1	0	0	9	2	6	0	5	143
New York	69	94	0	0	0	[2] 94	22	2	3	39	1,296
Rochester	6	3	0	0	0	2	2	0	0	0	65
Syracuse	9	1	0	0	0	0	1	1	0	16	49
New Jersey											
Camden	2	9	0	0	0	1	0	0	0	3	21
Newark	10	6	0	0	0	5	3	0	1	26	79
Trenton	1	1	0	0	0	3	1	1	1	4	80

[1] No estimate made.

[2] Pulmonary tuberculosis only.

City reports for week ended October 30, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
MIDDLE ATLANTIC—continued											
Pennsylvania											
Philadelphia	50	29	0	0	0	33	9	18	0	52	496
Pittsburgh	34	22	0	0	0	5	2	1	2	10	156
Reading	1	3	0	0	0	0	0	0	0	5	22
Scranton	2	4	0	0	0	2	0	0	0	2	41
EAST NORTH CENTRAL											
Ohio											
Cincinnati	10	12	1	0	0	11	2	4	0	1	119
Cleveland	21	25	1	0	0	11	3	1	1	25	202
Columbus	9	6	1	0	0	4	2	3	0	5	80
Toledo	10	10	1	0	0	5	2	2	1	15	73
Indiana											
Fort Wayne	1	0	0	0	0	1	0	1	1	0	23
Indianapolis	8	22	1	0	0	6	1	2	2	15	103
South Bend	3	0	0	0	0	0	0	0	0	0	10
Terre Haute	2	6	0	0	0	1	1	0	0	0	17
Illinois											
Chicago	90	66	1	0	0	43	8	11	1	45	639
Peoria	9	2	0	0	0	1	1	0	0	0	29
Springfield	2	4	0	0	0	1	1	0	0	8	24
Michigan											
Detroit	60	53	2	2	0	21	4	3	0	50	269
Flint	8	4	1	0	0	1	0	0	0	1	26
Grand Rapids	8	7	0	0	0	0	0	0	0	1	35
Wisconsin											
Kenosha	2	2	1	0	0	0	0	0	0	5	16
Madison	1	2	1	0	0	0	0	0	0	2	--------
Milwaukee	20	--------	2	--------	--------	--------	1	--------	--------	--------	--------
Racine	4	2	0	0	0	0	1	0	0	5	9
Superior	2	3	1	0	0	0	0	0	0	0	3
WEST NORTH CENTRAL											
Minnesota											
Duluth	6	11	1	0	0	0	1	0	0	0	18
Minneapolis	35	74	1	0	0	2	1	2	1	4	82
St Paul	14	27	4	0	0	5	1	0	0	13	66
Iowa											
Davenport	0	4	0	0	--------	--------	0	0	--------	1	--------
Sioux City	3	2	1	0	--------	--------	0	1	--------	6	--------
Waterloo	2	2	0	0	--------	--------	0	0	--------	3	--------
Missouri											
Kansas City	10	7	0	0	0	8	2	5	0	7	99
St Joseph	3	3	0	0	0	0	0	0	0	0	24
St Louis	33	32	0	0	0	7	3	3	0	12	220
North Dakota											
Fargo	2	10	0	0	0	1	0	0	0	0	13
South Dakota											
Aberdeen	0	6	0	0	--------	--------	0	0	--------	4	--------
Sioux Falls	1	5	0	0	0	0	0	0	0	0	--------
Nebraska											
Omaha	4	4	1	1	0	2	1	0	0	0	53
Kansas											
Topeka	3	1	1	0	0	3	1	0	0	5	9
Wichita	2	3	1	0	0	1	0	1	0	1	30
SOUTH ATLANTIC											
Delaware											
Wilmington	3	13	0	0	0	0	1	0	0	0	30
Maryland											
Baltimore	12	12	0	0	0	11	6	12	2	26	190
Cumberland	0	0	0	0	0	1	1	0	0	2	9
Frederick	1	2	0	0	0	0	0	1	0	2	2
District of Columbia:											
Washington	14	11	1	0	0	16	3	4	0	9	135

City reports for week ended October 30, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
SOUTH ATLANTIC—continued											
Virginia											
Lynchburg	1	2	0	0	0	0	1	2	0	2	4
Norfolk	1	5	0	0	0	3	1	1	1	2	
Richmond	8	5	0	0	0	2	2	0	0	0	45
Roanoke	2	4	0	0	0	0	1	3	1	2	24
West Virginia											
Charleston	1	3	0	0	0	1	0	2	0	0	13
Huntington	1	3	0	0			0	0		0	
Wheeling	3	1	0	0	0	0	0	0	0	0	12
North Carolina											
Raleigh	2	1	0	0	0	0	1	1	0	7	13
Wilmington	1	0	0	0	0	0	0	0	0	3	12
Winston-Salem	2	2	1	0	0	1	0	2	0	7	11
South Carolina											
Charleston	0	1	0	0	0	0	1	3	1	0	24
Columbia	0	2	0	0	0	0	0	1	0	0	
Greenville	0	0	0	1	0	0	0	1	0	0	6
Georgia:											
Atlanta	6	7	1	0	0	6	1	5	4	0	85
Brunswick	0	0	0	0	0	0	0	0	0	0	7
Savannah	1	0	0	0	0	2	1	2	0	0	39
Florida											
Miami		2		0	0	2		0	0	3	40
St. Petersburg	0		0		0	1	0		0		8
Tampa	0	0	0	2	0	2	0	0	0	0	18
EAST SOUTH CENTRAL											
Kentucky:											
Covington	2	3	0	0	0	0	0	0	0	0	17
Louisville	4	17	0	0	0	3	2	1	0	1	75
Tennessee											
Memphis	4	13	0	1	0	5	2	0	0	10	63
Nashville	4	15	0	0	0	3	3	15	6	6	49
Alabama											
Birmingham	4	13	0	0	0	4	2	11	1	1	70
Mobile	1	1	0	0	0	1	0	0	0	0	25
Montgomery	1	2	0	0	0	0	0	0	0	0	27
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	0	0			1	0		0	
Little Rock	2	1	0	0	0	1	2	1	1	0	
Louisiana											
New Orleans	4	5	0	0	0	11	4	3	0	0	143
Shreveport	1	0	0	0	0	1	1	0	0	0	25
Oklahoma											
Oklahoma City	2	1	0	0	0	2	0	0	0	2	23
Texas:											
Dallas	4	16	0	0	0	2	2	3	0	0	47
Galveston	0	1	0	0	0	2	0	0	0	0	14
Houston	2	2	0	1	0	1	0	0	0	0	42
San Antonio	0	1	0	0	0	6	0	2	1	0	45
MOUNTAIN											
Montana											
Billings	1	0	0	0	0	0	0	0	0	0	7
Great Falls	2	1	1	0	0	0	0	0	0	0	7
Helena	0	0	0	0	0	0	0	0	0	0	4
Missoula	0	9	1	0	0	0	1	1	0	0	4
Idaho											
Boise	1	0	0	1	0	0	1	0	0	0	5
Colorado:											
Denver	7	27	2	0	0	6	2	0	0	0	77
Pueblo	1	0	0	0	0	1	0	1	0	0	
New Mexico											
Albuquerque	0	2	0	0	0	9	1	1	0	0	15

City reports for week ended October 30, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
MOUNTAIN—con											
Arizona											
Phoenix	2	1	0	0	0	4	0	0	0	0	15
Utah											
Salt Lake City	2	3	0	0	0	1	2	3	0	5	40
Nevada:											
Reno	1	0	1	0	0	0	0	0	0	0	1
PACIFIC											
Washington											
Seattle	8	15	2	1			1	1		0	
Spokane	7	16	1	0			1	0		3	
Tacoma	2	4	1	7	0	0	0	0	0	0	23
Oregon											
Portland	7	21	3	3	0	3	1	1	1	0	60
California											
Los Angeles	15	37	3	0	0	20	3	1	1	4	210
Sacramento	1	4	0	0	0	1	1	0	0	0	20
San Francisco	7	12	0	0	0	9	2	5	0	15	154

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts.									
Boston	0	0	0	1	0	0	1	0	0
Rhode Island.									
Providence	0	0	0	0	0	0	0	1	0
Connecticut									
Hartford	0	0	0	0	0	0	0	1	0
MIDDLE ATLANTIC									
New York									
Buffalo	0	1	0	0	0	0	1	3	0
New York	1	1	4	2	0	0	9	2	0
Rochester	0	0	0	0	0	0	0	1	0
Pennsylvania									
Philadelphia	0	0	0	0	0	0	1	2	0
EAST NORTH CENTRAL									
Ohio									
Cleveland	0	0	1	0	0	0	1	3	0
Illinois.									
Chicago	1	1	1	2	0	0	3	2	0
Michigan.									
Detroit	1	0	1	0	0	0	1	1	0
Grand Rapids	0	0	0	0	0	0	0	1	1
WEST NORTH CENTRAL									
Minnesota									
Minneapolis	0	0	0	0	0	0	0	1	0
SOUTH ATLANTIC									
Maryland									
Baltimore	0	0	1	1	1	0	1	0	0
Virginia:									
Richmond	0	0	0	1	0	0	0	1	0
Roanoke	0	0	0	1	0	0	0	0	0

City reports for week ended October 30, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
SOUTH ATLANTIC—continued									
South Carolina									
Charleston [1]	0	0	0	0	4	1	0	0	0
Columbia	0	0	0	0	0	0	0	1	0
EAST SOUTH CENTRAL									
Tennessee									
Memphis	0	0	0	0	1	1	0	0	0
Nashville	1	1	0	0	0	0	0	0	0
Alabama									
Birmingham	0	0	0	0	1	1	0	0	0
Mobile	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL [2]									
Arkansas									
Little Rock	0	0	0	0	0	2	0	0	0
Louisiana [3]									
Shreveport	0	0	0	0	0	1	0	0	0
Texas									
Dallas	0	0	0	0	1	1	0	1	1
San Antonio	0	0	0	0	0	2	0	0	0
MOUNTAIN									
Colorado									
Denver	1	1	0	0	0	0	0	0	0
PACIFIC									
Washington									
Spokane	1	0	0	0	0	0	0	0	0
Oregon									
Portland	1	0	0	0	0	0	1	1	0
California:									
Los Angeles	1	1	0	0	0	0	0	1	0
Sacramento	1	1	0	0	0	0	0	0	0
San Francisco	0	1	2	2	0	0	0	0	0

[1] Dengue, 1 case at Charleston, S. C.
[2] Typhus fever; 1 case at Oklahoma City, Okla
[3] Plague (imported), 2 cases and 1 death at New Orleans, La

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended October 30, 1926, compared with those for a like period ended October 31, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925, and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, September 26 to October 30, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Oct. 3, 1925	Oct 2, 1926	Oct. 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926
101 cities	[2] 115	128	134	159	150	165	[3] 163	203	[4] 176	[5] 213
New England	74	66	96	66	120	85	[6] 94	85	132	106
Middle Atlantic	84	81	114	118	129	100	128	122	148	138
East North Central	[2] 130	136	153	188	166	219	180	261	186	[5] 244
West North Central	192	143	198	177	233	209	256	240	278	264
South Atlantic	207	163	179	216	209	218	[7] 252	302	213	357
East South Central	63	270	89	254	89	270	100	400	89	384
West South Central	62	211	79	176	88	219	101	280	251	331
Mountain	129	291	194	173	157	164	361	255	[4] 170	155
Pacific	102	175	102	200	105	175	135	191	149	205

MEASLES CASE RATES

	Oct. 3, 1925	Oct 2, 1926	Oct. 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926
101 cities	[2] 39	36	53	31	67	43	[3] 91	49	[4] 102	[5] 61
New England	242	21	371	33	431	26	[6] 578	26	582	24
Middle Atlantic	35	10	47	11	65	9	87	12	110	13
East North Central	[2] 24	24	24	29	24	36	45	47	54	[5] 69
West North Central	6	10	6	26	10	44	10	42	12	85
South Atlantic	23	13	15	15	52	21	[7] 37	26	56	9
East South Central	11	5	11	5	5	0	37	21	16	21
West South Central	0	0	0	0	0	13	13	4	4	0
Mountain	9	109	37	109	18	237	28	337	[4] 19	391
Pacific	3	329	11	181	28	291	11	278	14	342

SCARLET FEVER CASE RATES

	Oct. 3, 1925	Oct 2, 1926	Oct. 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926
101 cities	[2] 86	100	92	111	121	130	[3] 127	152	[4] 155	[5] 168
New England	86	104	105	144	127	144	[6] 125	194	194	246
Middle Atlantic	62	51	65	57	75	62	96	51	106	92
East North Central	[2] 96	99	109	121	143	132	135	155	185	[5] 155
West North Central	176	197	119	215	256	318	284	373	292	354
South Atlantic	67	111	92	100	129	126	[7] 126	163	180	133
East South Central	74	99	121	145	142	145	121	223	74	332
West South Central	48	69	62	69	53	86	40	95	40	112
Mountain	176	319	148	300	46	264	111	446	[4] 189	364
Pacific	88	175	102	159	135	205	127	235	141	237

SMALLPOX CASE RATES

	Oct. 3, 1925	Oct 2, 1926	Oct. 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926
101 cities	[2] 2	1	5	3	8	4	[3] 7	3	[4] 10	[5] 3
New England	0	0	0	0	0	0	[6] 7	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	[2] 0	0	1	1	8	3	4	3	16	[5] 1
West North Central	2	2	10	2	0	6	4	0	25	2
South Atlantic	0	4	6	0	6	4	[7] 0	9	6	6
East South Central	0	0	16	10	42	0	5	10	5	5
West South Central	0	0	0	4	0	4	0	0	0	4
Mountain	9	9	9	9	28	9	9	0	[4] 9	9
Pacific	25	5	44	19	55	32	75	16	44	22

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively.

[2] Superior, Wis., not included.

[3] Barre, Vt., and Winston-Salem, N. C., not included.

[4] Helena, Mont., not included.

[5] Milwaukee, Wis., not included.

[6] Barre, Vt., not included.

[7] Winston-Salem, N. C., not included.

Summary of weekly reports from cities, September 26 to October 30, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926
101 cities	[2] 39	42	36	33	35	32	[3] 32	26	[4] 25	[5] 28
New England	46	17	26	17	24	57	[6] 14	19	17	12
Middle Atlantic	32	28	31	27	28	26	25	20	21	14
East North Central	[2] 20	33	21	23	31	15	9	13	15	[5] 18
West North Central	35	40	33	22	20	14	33	22	18	24
South Atlantic	50	115	52	77	65	66	[7] 73	77	25	75
East South Central	131	130	163	145	121	140	147	99	100	140
West South Central	92	47	57	22	44	26	79	22	79	39
Mountain	111	82	120	64	46	46	65	27	[4] 85	46
Pacific	28	19	8	22	19	16	30	13	19	19

INFLUENZA DEATH RATES

	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926
95 cities	[2] 5	6	3	4	6	6	[3] 8	7	[4] 10	[5] 11
New England	0	2	0	0	0	5	[6] 2	7	12	7
Middle Atlantic	3	2	3	3	5	4	8	8	10	8
East North Central	[2] 6	5	3	2	8	2	9	5	7	[5] 15
West North Central	6	0	4	6	6	11	6	2	11	2
South Atlantic	4	9	2	6	2	8	[7] 2	8	6	21
East South Central	16	10	0	5	16	16	5	10	26	10
West South Central	19	38	15	14	10	14	19	14	34	24
Mountain	0	18	9	18	0	27	37	27	[4] 9	9
Pacific	0	7	0	0	11	11	4	0	4	7

PNEUMONIA DEATH RATES

	Oct 3, 1925	Oct 2, 1926	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926
95 cities	[3] 61	69	63	64	90	77	[3] 88	85	[4] 117	[5] 96
New England	31	87	58	33	93	76	[6] 87	83	108	99
Middle Atlantic	68	71	63	76	94	88	89	104	136	101
East North Central	[2] 44	59	61	54	89	63	79	60	114	[5] 86
West North Central	36	70	45	63	58	53	60	49	97	63
South Atlantic	81	66	71	60	121	88	[7] 116	113	129	107
East South Central	100	109	110	83	95	52	121	99	105	135
West South Central	63	71	63	94	53	104	111	57	116	80
Mountain	139	155	92	55	120	118	111	127	[4] 76	182
Pacific	87	28	51	53	80	82	76	99	47	89

[2] Superior, Wis., not included
[3] Barre, Vt., and Winston-Salem, N. C., not included.
[4] Helena, Mont., not included.
[5] Milwaukee, Wis., not included.
[6] Barre, Vt., not included
[7] Winston-Salem, N. C., not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,460,114

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended October 23, 1926.—The following report for the week ended October 23, 1926, was transmitted by the Far Eastern Bureau of the Secretariat of the Health Section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Egypt. Alexandria	0	0	0	0	2	1
Mauritius: Port Louis	----	2	0	0	0	0
Madagascar Tamatave	1	0	0	0	0	0
British India						
Calcutta	----	0	----	15	4	2
Bombay	----	0	----	0	7	5
Madras	----	0	----	0	2	1
Rangoon	----	1	----	0	----	1

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Dutch East Indies						
Batavia	0	0	0	0	1	0
Padang	0	0	0	0	4	----
Siam Bangkok	0	0	1	0	2	1
China						
Amoy	0	0	5	----	0	0
Shanghai	0	0	3	1	0	0
U. S. S. R. Vladivostok	0	0	0	0	3	----

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia.—Aden, Jeddah, Kamaran, Perim.

Iraq.—Basrah.

Persia.—Mohammerah, Bender-Abbas, Bushire.

British India.—Karachi, Chittagong, Cochin, Vizagapatam, Tuticorin, Negapatam.

Ceylon.—Colombo.

Federated Malay States.—Port Swettenham.

Straits Settlements.—Singapore, Penang.

Dutch East Indies.—Cheribon, Surabaya, Samarang, Belawan-Deli, Sabang, Makassar, Banjermasin, Tarakan, Palembang, Menado, Samarinda, Pontianak.

Sarawak.—Kuching.

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.

Portuguese Timor.—Dilly.

French Indo-China.—Saigon and Cholon, Turane, Haiphong.

China.—Hong-Kong.

Formosa.—Keelung.

Japan.—Yokohama, Osaka, Nagasaki, Moji, Kobe, Niigata, Tsuruga, Hakodate, Shimonoseki.

Korea.—Chemulpo, Fusan.

Manchuria.—Mukden, Changchun, Harbin, Antung.

Kwantung.—Port Arthur, Dairen.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.

New Guinea.—Port Moresby.

New Britain Mandated Territory.—Rabaul.

New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.

New Caledonia.—Noumea.

Fiji.—Suva.

Hawaii.—Honolulu.

Society Islands.—Papeete.

AFRICA

Egypt.—Port Said, Suez.

Anglo-Egyptian Sudan.—Port Sudan, Suakin.

Eritrea.—Massaua.

French Somaliland.—Jibuti.

British Somaliland.—Berbera.

Italian Somaliland.—Mogadiscio.

Kenya.—Mombasa.

Zanzibar.—Zanzibar.

Tanganyika.—Dar-es-Salaam.

Seychelles.—Victoria.

Portuguese East Africa.—Mozambique, Beira, Lorenco Marques.

Madagascar.—Majunga.

Union of South Africa.—Durban, East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

Dutch East Indies.—Balik-Papan.

Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.

CANADA

Communicable diseases—Quebec—August, 1926.—Births and deaths in the Province of Quebec for the month of August, 1926, have been reported as follows:

Estimated population	2,570,000
Births	6,592
Birth rate per 1,000 population	30.77
Deaths (all causes)	2,890
Death rate per 1,000 population	13.49
Deaths under 1 year	1,176
Infant mortality rate	178.39
Deaths from—	
Cancer	123
Cerebrospinal meningitis	8
Diabetes	22
Diphtheria	20
Deaths from—Continued	
Heart disease	316
Influenza	16
Measles	12
Poliomyelitis (infantile paralysis)	3
Scarlet fever	10
Syphilis	7
Tuberculosis (pulmonary)	177
Tuberculosis (all other forms)	50
Typhoid fever	11
Whooping cough	53

CUBA

Communicable diseases—Habana—October, 1926.—During the month of October, 1926, communicable diseases were reported at Habana, Cuba, as follows:

Disease	New cases	Deaths	Remaining under treatment Oct. 31, 1926
Chicken pox	3		2
Diphtheria	5	1	1
Leprosy	3		10
Malaria [1]	135	2	31
Measles	3		
Scarlet fever	4		3
Typhoid fever [1]	93	12	71

[1] Many of these cases from the interior

FINLAND

Communicable diseases—August, 1926.—During the month of August. 1926, communicable diseases were reported in the Republic of Finland as follows:

Disease	Cases
Diphtheria	73
Dysentery	5
Paratyphoid fever	129
Poliomyelitis	1
Scarlet fever	50
Typhoid fever	78

MADAGASCAR

Plague—Tananarive Province—August 16–31, 1926.—During the 16 days ended August 31, 1926, 79 cases of plague with 78 deaths were reported in the Province of Tananarive, Madagascar. Of these, 17 cases, 1 bubonic and 16 pneumonic, occurred in the interior town of Tananarive. Of the remaining cases, 9 with 8 deaths were bubonic, 15 cases with 15 deaths pneumonic, and 38 cases with 38 deaths septicemic.

SALVADOR

Mortality from communicable diseases—San Salvador—August, 1926.—During the month of August, 1926, there were reported 61 deaths from communicable diseases at San Salvador, Republic of Salvador, of which 1 death was caused by diphtheria, and 1 by typhoid fever. There were reported 38 deaths from gastroenteritis and 21 from tuberculosis. Population, 85,000

Mortality—Republic of Salvador—Disease prevalence.—During the period under report 3,665 deaths from all causes were reported for the Republic of Salvador. Population, 1,600,000. Malarial and other tropical fevers were stated to be the most prevalent diseases.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended November 19, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Foochow	Sept. 19-Oct. 2			Present One death in foreign population
Nanking	do			Present.
Shanghai	do	2	24	Cases, native Deaths, in foreign and natives, international settlements
Swatow	Sept 26-Oct 2			Sporadic Slight increase reported
French Settlements in India	June 27-July 24	42	36	
India				Sept 5-18, 1926 Cases, 4,053, deaths, 2,386
Calcutta	Sept. 19-25	9	7	
Philippine Islands				
Manila	Oct. 2	1		
Siam				Sept 19-25. 1926. Cases, 39, deaths, 35. Apr. 1-Sept 25, 1926 Cases, 7,643, deaths, 5,023
Bangkok	Sept. 19-25	3		

PLAGUE

Place	Date	Cases	Deaths	Remarks
France				
Paris	Oct 18	1		
India				Sept. 5-18, 1926 Cases, 2,268, deaths, 1,237.
Madras Presidency	Sept 12-18	56	27	
Rangoon	Sept. 26-Oct 2	3	3	
Java:				
Batavia	do	6	6	
Cheribon	Sept 12-18	1	1	
Madagascar				
Tananarive Province				Aug 16-31, 1926 Cases, 79, deaths, 78 Bubonic, pneumonic, and septicemic
Tananarive Town	Aug. 16-31	17	17	Bubonic, 1, pneumonic, 16
Other localities	do	62	61	Bubonic, 9, pneumonic, 15, septicemic, 38
Nigeria	May 1-June 30	76	71	
Senegal	Mar 1-Apr. 30	21	6	Later reports
Do	May 1-31	129	71	
Siam				Apr 1-Sept 25, 1926 Cases 15, deaths, 10
Tunisia	July 21-Aug 20	1		

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended November 19, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria	July 21-Aug 20	87		
Brazil				
Bahia	Sept 25-Oct 2	3	1	
Pernambuco	Sept 12-25	51	4	
Rio de Janeiro	Oct 3-16	196	113	Jan 1-Oct 16, 1926 Cases, 3,601, deaths, 1,896
Sao Paulo	June 27-Aug 22		5	
Canada				
Ontario—				
Toronto	Oct 17-23	1		
Ceylon				
Colombo	Sept 19-Oct 2	6		
China				
Changchun	Sept 5-11	1		
Foochow	Sept 19-Oct 2			Present
Fushun	Sept 12-18	1		
Penhsihu	Aug 8-22	2		
Ssupingkai	Aug 1-7	1		Manchurian Railway.
Wa-feng-tien	do	1		Do
Chosen	June 1-30	119	25	
Egypt				
Alexandria	Aug 24-Oct. 7	2	1	
France	July 1-31	17		
Paris	Oct 1-10	22	4	
St Etienne	Sept 16-30	2	1	
French Settlements in India	June 27-July 31	37	37	
Gold Coast	June 1-30	9		
Great Britain				
England and Wales	Oct 3-16	253		
Hull	Oct 17-23	1		
London	Oct 10-16	1		
India				Sept 5-18, 1926. Cases, 3,831, deaths, 851
Calcutta	Sept 19-Oct 2	7	5	
Madras	Oct. 3-9	11	1	
Italy	July 11-31	8		
Japan	June 20-26	17		
Do	June 27-July 17	40		
Java				
Batavia	Sept 19-25	1		Province.
Surabaya	Sept 5-11	10	1	
Mexico	May 1-31		297	
Nigeria	May 1-June 30	117	16	
Portugal				
Lisbon	Oct 3-23	4		
Russia	Apr 1-30	426		
Siam				Sept 19-25, 1926 Cases, 7; deaths, 4 Apr 1-Sept. 25, 1926 Cases, 583, deaths, 230
Bangkok	Sept. 19-25	7	4	
Spain				
Valencia	Oct 17-23	1		
Tripolitania	May 1-June 30	1		
Tunisia	June 21-30	1		
Do	July 1-Aug 20	15		
Union of South Africa				
Transvaal—				
Johannesburg	Sept. 19-25	2		

TYPHUS FEVER

Algeria	July 21-Aug 20	18	1	
Chosen	June 1-30	118	21	
Egypt				
Alexandria	Oct 1-7	1	1	
Port Said	do	1		
Hungary	May 1-June 30	3		
Ireland (Irish Free State)				
Cork County	Oct 17-23	1		
Lithuania	July 1-31	17		
Mexico	May 1-31		45	
Mexico City	Oct. 10-23	13		Including municipalities in the Federal district
Morocco	July 1-31	10		
Palestine				Oct 5-11, 1926: Cases, 7.
Petah Tokvah	Oct. 5-11	3		
Poland	July 25-Aug. 14	64	4	
Russia	Apr. 1-30	3,833		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended November 19, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Tunisia	June 21-30	6		
Do	July 1-Aug. 20	58		
Union of South Africa				
Natal—				
Durban	Sept 11-18	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Gold Coast	June 1-30	2	1	
Nigeria	do	1	1	

Reports Received from June 26 to November 12, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926 Cases, 31, deaths, 29
China				
Amoy	Aug 8-Oct 2	235		Stated to be present in epidemic form
Canton	June 1-30	38	14	
Do	July 15-31	54	28	
Foochow	Aug 15-Sept 18			Present
Kulangsu	Sept 12-18		2	
Manchuria—				
Dairen	Aug 23-29	1	1	
Nanking	July 25-Aug 7			Do
Shanghai	Reported July 20	35	8	
Do	July 25-Sept. 18	36	385	Cases, foreign, deaths, native and foreign.
Swatow	July 11-Sept 25	36	63	Japanese settlements, 10 deaths, Chinese, 30 to 40 deaths daily, estimated
Tsingtao	July 11-Aug 30	4	4	
Chosen				
North Heian Province	Sept 3-16	70	30	Deaths estimated
Shingishu	Sept 13	19		Including places in vicinity
French Settlements in India				Mar 7-June 26, 1926 Cases, 31; deaths, 30
India				Apr. 25-June 26, 1926: Cases, 18,526, deaths, 11,531 June 27-Sept. 4, 1926 Cases, 20,991, deaths, 13,391
Bombay	May 30-June 5	1	1	
Do	July 18-Aug 28	3	3	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-Sept 18	295	265	
Madras	May 16-June 5	2	1	
Do	Aug 1-Sept. 25	7	6	
Rangoon	May 9-June 26	67	44	
Do	June 27-Sept 4	31	29	
Indo-China:				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug 14	31	17	
Japan				To Sept 10, 1926 Cases, 35
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama.
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Taihoku	Sept 1-10	2		
Wakayama	To Sept. 10	2		

1 From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 12, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
Philippine Islands				
Manila	May 18-24	2	2	
Do	June 27-Sept 11	13	3	
Provinces—				
Albay	Apr 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb 21-Mar 6	3	3	
Pampanga	July 25-31	1	1	
Rizal	July 18-24	1		
Romblon	Dec 14-31	42	43	
Do	Jan 2-Mar 27	41	35	
Siam				Apr 1-Sept 18, 1926 Cases, 7,604, deaths, 4,988
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-Sept 18	91	33	
Straits Settlements				
Singapore	July 4-17	2	1	
On vessel.				
Steamship Macedonia	Aug 5	7		At Yokohama, Japan Vessel sailed from Singapore, July 18, 1926

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported.
Do	July 1-20	1		
Do	Sept 23	1		
Bona	Aug. 14	1		
Oran	Sept 21-Oct 10	9	4	
Philippeville	Sept 7	1		
Azores				
Fayal Island—				
Horta	Aug 2-29	2	2	
St Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	
Brazil				
Paranagua	Oct. 8			Present
British East Africa.				
Kisumu	May 16-22	1	1	
Do	Aug 17-Sept 11	3	2	
Uganda	Mar 1-June 30	732	574	
Canary Islands.				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	
China				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug 7	28		
Foochow	June 6-July 31			Several cases Not epidemic
Nanking	May 9-Sept. 18			Prevalent
Swatow	July 25-31	14		
Ecuador				January-June, 1926 Cases, 385, deaths, 154
Chimborazo	January-June	9	2	Rats, taken, 766
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1-Sept 30	16	3	Rats taken, 62,544; found infected, 89
Leon	January-June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1,542
Egypt				Jan 1-Sept. 9, 1926. Cases, 128.
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	3	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
Sidi Barani	Sept. 30-Oct. 12	19	3	In western desert.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 12, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
France				
Marseille	July 8	1	1	Reported July 24
St Denis	Reported Aug 2	1		Vicinity of Paris
St Ouen	Aug 14	2		Suburb of Paris
Great Britain				
Liverpool	Aug 29-Sept 4	2	1	
Greece				
Athens	Apr 1-May 31	16	4	Including Piræus
Do	Aug 1-Sept 30	20	5	Do
Patras	May 27-June 12	4	1	
Do	July 25-Oct 2	8	4	
Zante	May 17	1		
Hawaii				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill.
Paauhau	July 18-24			Plague-infected rat trapped
India				Apr 25-June 16, 1926 Cases, 53,001, deaths, 41,576 June 27-Sept 4, 1926 Cases, 3,471, deaths, 2,038
Bombay	May 2-June 26	16	15	
Do	July 18-Sept. 18	9	8	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	162	93	
Do	July 4-Sept 11	399	291	
Rangoon	May 9-June 26	20	15	
Do	June 27-Sept 25	80	69	
Indo-China				
Saigon	May 23-June 26	8	3	
Do	July 18-Aug 7	2	1	
Iraq				
Baghdad	Apr 18-June 12	161	108	
Do	July 18-Sept 11	4	4	
Japan				
Yokohama	July 2-Aug 10	9	80	
Java				
Batavia	Apr 24-June 19	65	65	
Do	June 26-Sept 11	64	62	
Cheribon	Apr 11-24	3	3	
East Java and Madura	June 13-19	1	1	
Do	July 25-31	1	1	
Surabaya	Aug 22-28	17	2	
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic.
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Majunga Province	do	10	6	
Mananjary Province	do	1	1	
Moramanga Province	Apr. 1-15	2	2	Do
Tananarive Province				Apr. 1-June 30, 1926 Cases, 130, deaths, 120 July 1-Aug. 15, 1926 Cases, 47, deaths, 41
Towns—				
Majunga	Aug 1-15	14	10	
Tamatave (Port)	May 16-31	1	1	
Do	July 1-Aug 15	6	5	
Tananarive	Apr 1-June 30	7	7	
Do	July-Aug 15	7	7	
Mauritius				
Port Louis	July 31	1	1	
Nigeria				Feb. 1-Apr 30, 1926 Cases, 115; deaths, 92
Peru				May-June, 1926 Cases, 57, deaths, 16 July 1-Sept. 30, 1926 Cases, 89; deaths, 52.
Departments—				
Ancash	May 1-31			Present
Do	July 1-Sept 30	2		
Cajamarca	May 1-June 30	10	4	
Do	Aug. 1-Sept. 30	1		
Ica	May 1-31	1		
Do	July 1-31	1		
Junin	Sept 1-30	21	20	
Lambayeque	do	1		
Libertad	May 1-31	4		
Do	Sept 1-30	3	1	
Lima	May 1-June 30	29	12	
Do	July 1-Sept. 30	60	31	
Piura	June 1-30	13		
Russia				Jan 1-Mar 31, 1926 Cases, 37.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 12, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Senegal				Nov. 1-30, 1925 Cases, 3, deaths, 2 Mar 1-Apr 30, 1926. Cases, 15; deaths, 1
Siam				Apr 1-Sept 11, 1926 Cases, 15, deaths, 10.
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Do	July 1-17	1	1	
Syria				
Beirut	July 1-Aug 10	2		
Do	Oct 15			Present
Tunisia	May 11-June 30	174		
Do	July 1-20	12		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan.
Turkey:				
Constantinople	Aug 1-Sept 25	7	4	
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug. 21	3	3	
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District	Aug 15-21	1		
Protestpan	May 9-22	3	3	
On vessel				
Steamship Zaria	September, 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa, 29 plague-infected rats found on board

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 20	14		
Do	July 1-Aug. 31	3		
Arabia:				
Aden	Oct 3-9	1		Imported
Belgium				
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-Aug 31	16	8	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Sept 18	68	38	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-Sept 25	29	19	
Pernambuco	July 11-Sept. 11	115	18	
Porto Alegre	Aug. 10-31	2		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 25	2,534	1,338	
Santos	Mar 1-7		1	
British East Africa:				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Do	Sept 11-17	1		
Canada				May 30-June 12, 1926: Cases, 46
Alberta				May 30-June 12, 1926: Cases, 3
Calgary	Sept 5-Oct 16	21		June 27-Oct 16, 1926: Cases, 53
British Columbia—				
Vancouver	Aug 16-Sept 12	3		
Manitoba				May 30-June 26, 1926 Cases, 15
Winnipeg	June 6-12	5		June 27-Sept. 25, 1926. Cases, 19.
Do	July 4-Sept 4	12		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 12, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Canada—Continued				
New Brunswick—				
Northumberland County	Oct 11-23	1		
Ontario				May 30-June 26, 1926 Cases, 36. June 27-Oct 23 Cases, 87
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2		
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Peterboro	Sept 1-30	10		
Toronto	July 18-Oct 9	11		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16, June 27-Oct 23 Cases, 89
Regina	July 4-Sept 25	3		
Ceylon				Mar 14-May 29, 1926. Cases, 44, deaths, 3 Sept 12-18, 1926 Cases, 2
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Changsha	Aug 8-14	1		
Chungking	May 2-Sept 18			Present
Foochow	May 2-Sept 11			Do
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-July 3	1		Do
Dairen	Apr. 26-June 20	69	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do
Harbin	May 14-June 30	21		Do
Do	July 1-28	12		
Kai-yuan	May 16-June 30	16		Do.
Kungchuling	June 13-19	1		Do
Liaoyang	May 16-June 30	4		Do.
Mukden	do	4		Do.
Penhsihu	May 16-June 19	4		Do.
Ssupingkai	May 16-June 30	2		Do
Teshihchiao	do	2		Do
Wa-feng-tien	do	3		Do
Nanking	May 8-Sept 18			Present
Shanghai	May 2-June 26	10	25	Cases, foreign Deaths, population of international concession, foreign and native
Do	June 27-July 24	3	3	
Swatow	May 9-Sept 25			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-May 31, 1926 Cases, 548, deaths, 121
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Aug 19	11	5	
Cairo	Jan 29-May 13	39	8	
Esthonia				May 1-June 30, 1926 Cases, 3
France				Mar 1-June 30, 1926 Cases, 141.
Paris	Sept 1-20	21	5	
St Etienne	Apr 18-June 15	7	3	
French Settlements in India	Mar. 7-June 26	282	282	
Gold Coast	Mar. 1-May 31	662	13	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 12, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Great Britain				
England and Wales				May 2[illegible]-June 26, 1926. Cases, 933 June [illegible]7-Oct 2, 1926 Cases, 1,385
Birmingham	Sept 26-Oct 2	1		
Bradford	May 23-29	1		
Do	Aug 29-Sept 4	1		
London	Sept 26-Oct 2	2		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-Oct 9	4		St. Gateshead, several cases reported
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Oct. 2	9		
South Shields	Oct 3-9	1		
Greece.				
Athens	July 1-31	71	6	Including Piræus.
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr 25-June 26, 1926 Cases, 54,851, deaths, 14,771 June 27-Sept 4, 1926 Cases, 22,163; deaths, 7,099
Bombay	May 2-June 26	220	134	
Do	June 27-Sept. 18	112	61	
Calcutta	Apr. 4-May 20	171	152	
Do	June 13-26	24	18	
Do	June 27-Sept 18	38	37	
Karachi	May 16-June 26	44	18	
Do	June 27-Oct 2	14	7	
Madras	May 16-June 26	7	4	
Do	June 27-Oct 2	60	18	
Rangoon	May 9-June 26	10	5	
Do	July 4-Sept 11	21	4	
Indo-China:				
Saigon	May 9-June 26	2		
Iraq:				
Baghdad	do	8	3	
Do	July 4-Sept 11	3	1	
Basra	Apr 18-June 22	34	25	
Do	Aug 15-21	1		
Italy				Mar 28-June 26, 1926 Cases, 34 June 27-July 10, 1926: Cases, 3
Catania	Aug 9-15	2		Entire consular district, including island of Sardinia
Rome	June 14-20	4		
Jamaica				Apr 25-June 26, 1926 Cases, 201 (Reported as alastrim.)
Do				June 27-Sept 25, 1926 Cases, 238 (Reported as alastrim.)
Japan				Apr 11-June 19, 1926 Cases, 641.
Kobe	May 30-June 5	1		
Nagoya	May 16-June 22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		
Java:				
Batavia	May 15-June 25	2		Province.
Do	July 24-Sept 18	9		Do
East Java and Madura	Apr. 11-July 3	100	6	
Do	July 4-Aug 7	43	1	
Malang	Apr. 4-10	6	1	Interior.
Surabaya	May 16-22	14	1	
Do	July 18-Sept 4	87	6	
Latvia				Apr 1-June 30, 1926 Cases, 5
Mexico				Feb. 1-Apr 30, 1926. Deaths, 982
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-Sept. 27		8	
Mexico City	May 16-June 5	3		Including municipalities in Federal District.
Do	July 25-Sept. 25	6		Do.
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan. 1-June 30			Present: 100 miles from Chihuahua.
San Luis Potosi	June 13-26		7	
Do	July 4-Oct. 23		19	
[illegible]	June 1-10		2	
[illegible]	May 1-June 30		17	
[illegible]	July 1-Sept. 30		13	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 12, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Netherlands				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-Apr 30, 1926 Cases, 401, deaths, 33
Persia				
Teheran	Apr 21-July 23		10	
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May 1, 1926 Cases, 12, deaths, 1 June 27-July 24, 1926 Cases, 2, deaths, 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Sept 25	22	6	
Oporto	May 23-June 5	4		
Do	July 11-24	2		
Russia				Jan 1-Mar 31, 1926 Cases, 2,103
Siam				Apr 1-Sept 18, 1926 Cases, 576, deaths, 226
Bangkok	May 2-June 12	23	20	
Do	July 4-Sept 18	67	51	
Spain				
Valencia	Aug 22-Sept 25	2		
Straits Settlements				
Singapore	Apr 25-May 1	1		
Do	July 11-17	1		
Sumatra				
Medan	Aug 22-28			One case varioloid
Switzerland				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tripolitania	Apr 1-30	11		
Tunisia				Apr 1-June 30, 1926 Cases, 17
Tunis	Aug 11-30	2		
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks
Do	Aug 15-21			Do
Idutya district	May 23-29			Do
Natal	May 30-June 5			Do
Orange Free State	June 20-Aug 28			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts.
Do	Aug 29-Sept 4	1		Native
Johannesburg	May 9-June 12	5		
Do	July 11-Sept 4	2		
Yugoslavia				Apr. 15-30, 1926. Cases, 2, deaths, 1.
Zagreb	Aug 9-15	2		
On vessels				
S S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed At Durban, Union of South Africa June 16, 1926 One suspect case landed.
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada. Patient from Glasgow, removed at quarantine on outward voyage.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	May 21-June 30	7	1	
Do	July 21-Aug. 31	3		
Argentina				
Rosario	Feb 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Do	Aug 1-31	9	1	
Bulgaria				Mar 1-June 30, 1926. Cases, 87, deaths, 14

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 12, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Chile				
Antofagasta	May 23–June 26	4		
Do	June 27–July 3	1		
Concepcion	June 1–7		1	
Valparaiso	Apr 29–May 5		1	
Do	Aug 14–Sept 18	7		
China				
Antung	June 14–27	7	1	
Do	June 28–Oct 10	37	1	
Canton	May 1–31	1		
Chunking	Aug. 29–Sept 4			Present
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chingking consular district
Chosen				Feb 1–May 31, 1926 Cases, 887, deaths, 91
Chemulpo	May 1–June 30	38	2	
Do	July 1–31	7	2	
Gensan	June 1–30	1		
Seoul	do	8	3	
Do	July 1–Aug 31	8		
Czechoslovakia				Jan 1–June 30, 1926· Cases, 156, deaths, 6.
Egypt				
Alexandria	July 16–Aug 19	3		
Cairo	Jan 29–May 13	89	27	
Do	July 23–Aug. 5	1		
Port Said	June 4–24	4	1	
Do	July 9–Aug 19	4	1	
Great Britain				
Scotland—				
Glasgow	July 30–Aug 21	9	1	
Greece				
Athens	Sept 1–30		17	Including Piræus
Ireland (Irish Free State):				
Cobh (Queenstown)	May 30–June 5	1		
Do	June 27–July 3	1	1	
Cork	June 5	1		
Kerr County—				
Dingle	June 27–July 3	1		
Italy				Mar 28–May 8, 1926 Cases, 3.
Palermo	Sept, 12–18	1		
Japan				Mar 28–May 29, 1926 Cases, 37
Latvia				May 1–June 30, 1926 Cases, 19
Lithuania				Mar 1–June 30, 1926. Cases, 190, deaths, 22
Mexico				Feb 1–Apr. 30, 1926 Deaths, 110
Durango	July 1–31		1	
Mexico City	May 16–June 5	20		Including municipalities in Federal District
Do	June 13–19	9		Do
Do	July 25–31	3		Do
Do	Aug 15–Oct 9	46		Do
San Luis Potosi	June 13–26			Present, city and country.
Morocco				Mar 1–June 30, 1926 Cases, 426
Norway:				
Stavanger	Sept. 6–12	1		
Palestine				Mar 1–June 30, 1926. Cases, 11; deaths, 1. Aug 10–Sept. 13, 1926· Cases, 5
Gaza	July 6–12	1		
Haifa	July 13–Aug 30	5		
Halalal	Aug, 17–23	1		
Jaffa district	June 15–28	5		
Do	Sept. 28–Oct. 4	1		
Jerusalem	Sept. 14–27	2		
Majdal district	July 13–Aug. 2	2		
Nazareth district	do	3		
Tiberias	Aug. 3–9	1		
Yavneil	Aug. 17–23	1		
Persia:				
Teheran	May 23–June 22		1	
Peru:				
Arequipa	Jan 1–31		2	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 12, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85 June 27-July 24, 1926 Cases 147, deaths, 11
Rumania				Mar 1-May 31, 1926 Cases, 711, deaths, 69
Russia				Jan 1-Mar 31, 1926 Cases, 14,814
Tunisia				Apr 1-June 30, 1926 Cases, 110
Tunis	June 11-30	3		
Turkey				
Constantinople	June 16-22	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths, 19
Do				July 1-31, 1926 Cases, 90, deaths, 17
Cape Province				Apr 1-June 30, 1926 Cases, 202, deaths, 24, native July 1-31, 1926 Cases, 58, deaths, 15
Glengray district	June 27-July 3			Outbreaks
Grahamstown	do	1		
Natal				Apr 1-June 30, 1926 Cases, 28 July 1-31, 1926 Cases, 23 deaths, 2
Durban	July 25-Aug 14	10	1	
Orange Free State				Apr 1-June 30, 1926 Cases, 21, deaths, 4 July 1-31, 1926, Cases, 7
Transvaal				Apr 1-June 30, 1926 Cases, 10, deaths, 5 July 1-31, 1926 Cases, 2 Aug, 15-21, 1926
Johannesburg	Aug 29-Sept 4	1		Outbreaks
Walkkerstroom district	June 20-26			Outbreaks
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 48, deaths, 7 July 1-Aug 31, 1926, Cases, 3; deaths, 1
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas.
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr 1-May 31	6	3	

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TREASURY DEPARTMENT

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SPECIAL ARTICLES

Distribution of Goiter in the United States
Sanitary Control of Ground-Water Supplies

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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C C. PIERCE, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912.

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PUBLIC HEALTH REPORTS

VOL. 41 NOVEMBER 26, 1926 NO. 48

DISTRIBUTION OF ENDEMIC GOITER IN THE UNITED STATES AS SHOWN BY THYROID SURVEYS

By ROBERT OLESEN, Surgeon, United States Public Health Service

A knowledge of the distribution of endemic goiter in the United States is essential both to an understanding of the causation of the malady and the intelligent application of prophylactic measures. Obviously, when accurately determined fluctuations in distribution are known, clues to the remote etiology of simple thyroid enlargement will be nearer at hand Likewise, a knowledge of distribution enables the formulation of effective plans for prophylactic endeavor. In the present article an effort has been made to assemble the known facts concerning the distribution of endemic goiter in the United States. While due diligence has been exercised in compiling the data, it is probably far from complete However, the publication of a list of thyroid surveys may cause additional work of similar character to be made known.

Goiter among drafted men.—Prior to the World War no information concerning the nation-wide distribution of goiter was available, for relatively few surveys had been made. The draft examinations, however, provided valuable information concerning both simple and exophthalmic goiter. Manifestly, the draft examinations, particularly as they applied to goiter, were subject to certain unavoidable handicaps which, to some extent, affected the accuracy of the observations. In the first place the subjects of the examinations were men of military age, in whom endemic goiter is likely to be less prevalent than among adolescent girls Secondly, the examiners were physicians with varying degrees of skill and experience in diagnosing thyroid disorders. Consequently the various findings may not be strictly comparable with each other.

Another difficulty with the draft figures, as customarily presented, is the failure to indicate variations in distribution of goiter within the individual States. Inasmuch as differences in goiter incidence within relatively small areas are common, it is desirable that the information derived from the draft examinations be supplemented. However, even with their manifest limitations the draft figures represent a reliable general index of nation-wide goiter incidence.

Table 1, in which is shown the incidence of endemic goiter among men examined for military service during the World War, is reproduced because of its continued interest. Generally speaking this tabluation indicates a greater frequency of the malady in the Pacific Northwest and in the Great Lakes Basin.

TABLE 1 —*Number of instances of endemic goiter and ratio per 1,000 examinations among 2,510,701 men examined for military service in the United States during the World War (by States)* [1]

State	Number of cases	Ratio per 1,000	State	Number of cases	Ratio per 1,000
Idaho	336	26.91	Kentucky	90	1.41
Oregon	421	26.31	District of Columbia	16	1.39
Washington	832	23.40	Kansas	48	1.25
Montana	576	21.00	Arizona	10	1.21
Utah	185	15.72	New York	308	1.19
Wyoming	102	15.37	Maryland	35	.94
Wisconsin	886	14.02	South Carolina	37	.94
Alaska	16	13.14	Connecticut	32	.89
Michigan	1,131	11.43	New Mexico	9	.88
North Dakota	156	8.73	Oklahoma	44	.72
Minnesota	578	8.04	New Hampshire	6	.70
West Virginia	307	7.89	Maine	13	.66
Illinois	1,397	7.79	Mississippi	24	.64
Iowa	458	6.68	Louisiana	32	.62
Indiana	464	6.49	Delaware	3	.59
Nevada	21	6.38	Alabama	29	.56
Ohio	798	5.59	Rhode Island	8	.55
Colorado	119	5.29	Georgia	33	.52
California	359	4.45	New Jersey	33	.43
Pennsylvania	829	4.10	Arkansas	17	.40
South Dakota	85	4.09	Massachusetts	29	.32
Missouri	342	3.99	Texas	36	.30
Virginia	188	3.38	Florida	6	.25
Nebraska	63	2.14	State not specified	186	1.96
Vermont	18	2.14			
Tennessee	120	1.96	Total	11,971	4.35
North Carolina	100	1.81			

[1] Table 18, p 111, of Defects Found in Drafted Men, by A G Love and C B Davenport Prepared under the direction of the Surgeon General, M H Ireland, War Department, Washington, D. C., 1920

Independent thyroid surveys —In addition to assembling again the findings of the draft examinations there are presented in the present article the results of thyroid surveys made in various sections of the United States. Quite naturally the results of independently made goiter surveys can be accepted only after making due allowances for the conditions under which the figures were secured This reluctance to accept the findings is due to several causes.

The chief difficulty in comparing goiter statistics in different sections of the country arises from the fact that the dividing line between the normal and enlarged thyroid gland is not definitely known. Consequently a thyroid which is considered normal in a section having a considerable incidence may be regarded and often is recorded as a definite enlargement in districts of slight prevalence.

Another obvious defect in thyroid surveys made by independent workers results from the failure to employ similar methods of examination, as well as a common means of classifying the several degrees of goiter detected. These facts, when considered in connection with the varying skill and experience of the examiners,

militate to a considerable extent against the usefulness of the data for purposes of comparison.

However, the information derived from the various surveys is of value as illustrating the widespread interest which is being taken in the solution of the goiter problem Moreover, the evidence adduced by thyroid surveys among individuals of elementary grades, high school, and college, is largely confirmatory of the results of the draft figures

An interesting point which has been brought out in connection with the goiter surveys is the finding of goiter in places in which its presence has heretofore been unsuspected Many variations in incidence would undoubtedly be brought to light by additional systematic surveys Consequently, valuable data relating to goiter would become available.

How the data were secured—The material presented in Table 2 was obtained from two principal sources. First, by consulting the literature and, second, by direct correspondence with all State, county, and city health officers in the United States, the last-named officials being located in communities with populations in excess of 10,000 More than 95 per cent of the health officers from whom information was requested by the Public Health Service, promptly submitted replies concerning the presence or absence of simple thyroid enlargement. In many instances valuable collateral comment was forthcoming at the same time

In Table 2 the available information has been arranged to show the number of persons of each sex examined and also the percentage of thyroid enlargements recorded In some instances this information is not complete, in others, only estimates are presented. From the many localities not listed in Table 2 the information was elicited that thyroid surveys had not been made. However, sufficient survey data are at hand to enable the formulation of rather definite opinions concerning the distribution of simple goiter in many sections of the United States.

In several places, among which may be mentioned Rochester, N. Y , Lorain, Ohio, and Aroostook County, Me , resurveys have been made. Provided such reexaminations are conducted by the same observers, under similar conditions, the resulting information serves to indicate changes, or lack of changes, which have either occurred naturally or followed the institution of prophylactic measures. Authentic facts of this character are valuable contributions to the epidemiology of goiter.

The need for uniformity in making surveys—Particularly noteworthy in the tabulation of surveys is the irregularity of goiter distribution within many States. This condition may be due either to actual variations in incidence or to differences in the methods of

examination employed by the examiners. Conceding the desirability of a more accurate knowledge concerning the distribution of endemic goiter in the United States, there would appear to be need for careful schooling of examiners in diagnostic procedure, thereby insuring findings of comparable character Particularly valuable in obtaining such results are personal study and practice, supplemented by instruction from persons familiar with normal and abnormal thyroid glands

Instructions for making thyroid surveys are available in several publications.[2] However, for practical purposes a theoretical knowledge can not supplant the advantages accruing from actual experience. As procedure becomes standardized it is conceivable that valuable information regarding the epidemiology of goiter will be forthcoming Furthermore, such data will be useful in encouraging the application of prophylactic measures where they are most needed.

In this connection it should be pointed out that a thyroid survey is a time-consuming procedure and is not to be undertaken to the exclusion and detriment of more important public-health projects. Frequently a thyroid survey can be made as a collateral portion of general physical examinations. When this policy is pursued, time is conserved, and at the same time possible correlations between thyroid enlargement and other physical states may be indicated.

SUMMARY

1. The distribution of goiter in the United States, as disclosed by numerous thyroid surveys, parallels the goiter findings among drafted men.

2. There are manifestly wide variations in the methods of determining thyroid enlargements. The classifications of various degrees and types of involvement also range within wide limits. Uniform procedure is a necessity if findings in different sections of the country are to be compared.

3. Based upon incidence, wholesale prophylaxis for endemic goiter is apparently not required in all States.

4. Individual thyroid surveys disclose foci of endemic goiter in localities not previously regarded as being located in goitrous territory.

5. Resurveys are desirable for the purpose of learning the extent and character of changes occurring either under natural conditions or after widespread prophylaxis has been instituted.

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[2] Marine, Lenhart, Kimball, and Rogoff The Prevention of Simple Goiter. Western Reserve University Bulletin, vol 26, No 7, July, 1923

Robert Olesen: Thyroid Survey of 47,493 Elementary-School Children in Cincinnati. Public Health Reports, vol 39, No 30, pp 1777-1802 (July 25, 1924) (Reprint No 941.)

Robert Olesen Endemic Goiter in Colorado Public Health Reports, vol 40, No. 1, pp 1-22, (Jan. 2, 1925). (Reprint No 983).

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 40 States by different observers, according to age and sex of the individuals examined, and location of the places*

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
ALABAMA									
ce	15–18		158			18 3		W D Hubbard	
in County				5,000			0 08	G C Marlette	Very rare.
t County				36,000			06	W T Burkett	Entire population.
County								L T Lee	Unknown
lin County								L J Graves	Very little goiter
stone County								L R Murphree	Not much goiter
le County								C A Mohr	No goiter problem.
an County								H C McRee	Not many found, but increasing
ega County				3,000			1	J H Hill	
ARIZONA									
Co[illegible] County				3,500			0 08	R. B Durfee	Not a local problem
CALIFORNIA									
San Francisco	10–14	2,795	6,379	9,174	4 2	17 4		W R P Clark	
Santa Cruz	12–18		372			58 6		E B Philbrook	
Monterey County								R C Main	Very little goiter
Orange County								V G Presson	Do
San Joaquin County								J J Sippy	Goiter rare
San Luis Obispo County								H K Sutherland	Not prevalent.
San Francisco County								W R P Clark	Does not exist in endemic form
14 counties							(1)	State board of health	Circular letter.
CONNECTICUT									
Stratford								DeRuyter Howland	Quite scarce
28 localities	10–23	5,797	6,609		7 0	29 4		United States Public Health Service	
COLORADO									
Colorado Springs		853	846		38 2	44 6		O M Gillette	
Denver			9,493			27 3		V Van Meter	White girls
Do.			163			26 3			Colored girls
39 localities	2–19	1,630	1,644		10 1	23 3		Colorado Health Conference	
8 localities		825	937		53 3	73 4		State board of health.	
Do.	2–21	1,495	1,214		26 5	37 9		United States Public Health Service	
FLORIDA									
Jacksonville								H N Parker	Not regarded as a goitrous area

[1] Present.

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 40 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
GEORGIA									
Brunswick								H L Akridge	Goiter rare
Decatur County								M A. Fort	Very rare.
Hall County	10-20			3,000			0.8	B D Blackwelder	
Laurens County	12-18					1.0		O H. Cheek	
State								E G Jones	Relatively r
ILLINOIS									
Alton								D F Duggan	Quite a num goiter school
Chicago		171	255		19.1	40.7		Koch	
Do				145,565			6.2	Department of health	
Do								C G Buford	Frequent am children
Do		193	606		6.7	17.8		E T Olsen	Men and women.
Chicago Heights							3.5	E H Hay	School children.
Decatur	5-12			5,000			75.3	William S Keister	
East St. Louis								J T Connors	Very rare.
Galesburg								E D Wing	Not troubled with goiter
Oak Park	12-15		731			28.3		F S Needham	
Do						34.7		W J Potts	High school, 1924
Rock Island								Harry Frey	Not very prevalent
Cook County								H L Wright	Plenty of cases
State		10,829	4,325		4.6	24.5		J H Beard	High school graduates
University of Illinois			609			45.3		R P Guilder	
Western Illinois Teachers College	14-62		596			38.9		E B Ball	An outstanding defect
INDIANA									
Elwood								H W Fitzpatrick	Many cases
Fort Wayne	10-18					62.0		D. R. Beminghoff	
Hammond								William A Buchanan	To a certain extent.
Do							76.0	H S Kuhn	3 grade and 1 high school
Terre Haute	11-15			1,904		82.2		George T Johnson	
University of Indiana						32.8		F H Luck	
KANSAS									
Topeka	5-18	3,345	3,703		30.9	49.7		E. G. Brown	
McPherson County	5-18	780	720		38.0	50.0		L S. Steadman	
KENTUCKY									
Fayette County				2,500			0.48	J. S Chambers	

TABLE 2 —*Number of examinations and percentage of thyroid enlargements reported in 40 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

Place	Ages	Number examined: Boys	Number examined: Girls	Number examined: Boys and girls	Percentage with goiter: Boys	Percentage with goiter: Girls	Percentage with goiter: Boys and girls	Reported by—	Remarks
LOUISIANA									
Flor[illegible]ish				553			21 7	H S Smith	"River" parishes.
Bald[illegible]arish	6–18	583	583		35 7	67 6		L C Scott	"River" parishes.
Colb[illegible]rish	6–18	839	809		55 7	71 9		do	"River" parishes.
Dalla[illegible] and Frank[illegible]many Lime[illegible] Mobi[illegible] Morg[illegible] Talla[illegible]	6–18	1,158	1,227		47 5	58 2		do	"Forest" parishes.
MAINE									
Aro[illegible] County		690	979		7 2	44.3		C. F Kendall	1923
[illegible]na An[illegible]		833	1,039		8 9	38 8		do	1925
MARYLAND									
Carroll and Howard Counties.								W C Stone	Many adolescent girls with some enlargement
MASSACHUSETTS									
Berkshire towns around Pittsfield					4.0	17 0		George H Bigelow	
Boston					0	7 0		do	
Greenfield				600			1 6	George P. Moore	
Newburyport								W Thurston	No cases of goiter for number of years
Pepperell and Townsend					0	5 0		George H Bigelow	
Wellesley College						16 0		Canavan	From all parts of country
57 localities	13–20	7,140	10,057		8 7	22 0		Public Health Service	1925
MICHIGAN									
[illegible]ian				9,000			0 3	G Dock	1895
Arma	4–21	161	193		44.0	56 0		C F DuBois	College
		678	722		41 0	59 0		do	Public school.
Ca[illegible]t				14,000			3	G Dock	1895.
Cent[illegible]Mine				2,000			5	do	1895 (a few miles from Calumet).
Gaylord							25 0	do	1895
Grand Rapids		12,631	13,584		32 0	67 0		T Reed and H T Clay	
Iron Mountain							54.0	State Department of health	
Saginaw				12,742			23 4	W DeKleine and S Yntema	
Houghton County	5–18	6,860	6,865		58 1	70 5		R M Olin	
Macomb County	5–18			3,292			35 7	E F Eldridge	North of Berea Sandstone.
Do	5–18			6,246			20 2	do	South of Berea sandstone.
Midland County	5–18	5,152	1,811		24.4	41 1		R M Olin	
Olmstead County	9–14						4.4	D C Mebaue	City schools.
Do	9–14						8 0	do	Rural schools
Wexford County	5–18	1,963	2,021		47.6	63.4		Department of health	

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 40 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
MICHIGAN—Continued									
4 counties (Houghton, Wexford, Midland, Macomb)	5-18			31,612			47 2	Department of health	
Torch Lake and Schoolcraft townships	1-61	790	993		44 9	79 6		S Levin	
State				583			30 3	do	Regist
MINNESOTA									
Austin							9 5	C C Leck	816 enl in first, ninth g
Duluth	5-14	6,284	5,974		59 0	65 0		J M Robinson	
Minneapolis	0-18	843	1,063		59.2	73.8		Chester A Stewart	
Winona County							40.0	W. V Lindsay	
Nicollet County		134	201		12 0	45 3		T Clark and J N Gehlen	
St Louis and Cook Counties.		639	678		49 1	76 1		A R Blakey	
13 localities	10-19	1,770	2,291		40 9	71 0		Public health service	Public health survey Reprint 963.
MISSISSIPPI									
Meridian								T J. Houston	Very few goiters
Jones County								J M Kittrell	Light incidence
Harrison County				50,000			.07	D J Williams	Estimate
State							0 16	H A Gamble	
MISSOURI									
Craig	6-18		50			46 0		R R Miller	
Springfield								Lon Sharp	Not prevalent.
St Louis							3.0	B Lloyd	
Cape Girardeau County							5-12 0	E E. Huber	In swamp section; very little goiter.
New Madrid County.								W N O'Bannon	25 cases in school children in county.
MONTANA									
Anaconda								G. R. Soper	A great many goiters.
Missoula County	5-14			3,001			20 4	F O Peak	
7 counties	6-20	4,631	4,690		13.4	32.0		Fred T Foard	
University of Montana.					14.0	43 0		F. O. Peak	
NEBRASKA									
State								W. H. Wilson	Comparatively free.

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 40 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
NEW HAMPSHIRE									
Manchester				5,745			0 2	H A Streeter	
NEW JERSEY									
Irvington	6-17	982	1,168	2,150	3 5	14 7		H S Reichle	
NEW MEXICO									
Dona Ana County							0 1	C W Gerber	
NEW YORK									
Cohoes								E M Bell	20 females, 5 males with goiter.
Ithaca					25 0	50 0		Health department	
New York City			11,084			20 3		I H Goldberger and A K. Aldinger	
Do	8-21	783	11,084		5 4	15 9		Frances Cohen	
Do			3,000			3-4. 0		City department of health.	Washington Irving High School, 1917.
Do	14-16			5,000			1 6	do	20 girls, 64 boys, in mercantile office, 1922.
Do	20-30		7,500			3 0		J C Horan	Employees of Metropolitan Life Ins. Co
Rochester						25. 0		Department of health	High school and college
Do								do	3,844 cases among school children before iodizing water, 1,766 after.
Do								do	Incidence per year, 1923—3,844; 1924—1,926; 1925—2,010
Saratoga Springs								C B Small	Very infrequent.
Syracuse				23,303			15 0	City department of health	Grammar schools.
Do							20 0	do	High schools.
Do				7,149	26 6	73. 4		do	Parochial schools.
Do				25,875			16 0	do	Public schools.
Tonawanda				2,636			41 8	J E. Mabee	1924-25
Do				2,116			22 2	do	1925-26.
State				595,206			2. 6	I H. Goldberger and A K Aldinger	Urban and rural.
NORTH CAROLINA									
Asheville								D E Sevier	Very little goiter
Winston-Salem								R L Carlton	Goiter not a problem
Hyde County								Clyde Ruff	No goiter
State		49,350			0 2			State department of health.	Drafted men.

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 40 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
OHIO									
Akron	9-18		3,872			56 4		O P Kimball	
Do			9,679			48 64		Marine and Kimball	
Cincinnati	6-17	23,710	23,783		26 6	39 8		Public Health Service	
Cleveland			406			37 69		Marine and Kimball	
Glendale				363			29 2	O P Kimball	5 schools and kindergarten
Hamilton				4,251			39 0	A L Smedley	
Lorain	6-16			3,455			17 9	W S Baldwin	1921-22
Do	6-12			2,938			14 6	do	1922-23
Do	6-12			3,447			19 4	do	1924-25
Do	16-18	1,191	931		13 0	30 0		do	Examinations for work permits
Norwood				4,701			40 3	H. Wittenberg	
Springfield							24.0	O M Craven	Ratio of girls to boys, 4 to 1.
Warren			925			24 43		Marine and Kimball	
Allen County							7 0	J J Sutter	
Ashtabula County								W S Weiss	Incidence of goiter same as for all of northern Ohio.
Belmont County	5-10	908	831		22 0	36.0		F R Dew	
Butler County				500	20 0	40 0		C J Baldridge	
Coshocton County				1,850			36 2	D M Criswell	
Crawford County	6-16			1,603			56 0	G T Wasson	
Delaware County				3,048			29 3	A J Pounds	
Geauga County	5-14			2,500	20 0	40 0		G L Lyne	
Mahoning County					35 0	45 0		J. F. Edder	
Ross County								G E Robbins	Quite prevalent.
Washington County		2,194	2,043		24 5	35 7		A G. Sturgiss	
Wayne County	5-14						40 0	C D Barrett	
Marion		1,525	1,697		20 0	41 0		W J Weiser	
OKLAHOMA									
Oklahoma City				1,496			10 9	G F Mathews	2 counties.
Le Flore County							.33	W. F Lunsford	
OREGON									
Newport		620	1,647		10 8	26.1		W C Belt	Men and women (1916).
Portland		407	2,279		27 0	56 2		City Club's public health section	
Do					30 0	60 0		J Earl Else and B Peden	
Do				4,698			42.2	H A. Cary	
Douglas County				1,253			7 6	W C Belt	1925
Do				1,583			8.6	do	Do
Do				1,933			13.7	do	1926, south end of county

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 40 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
PENNSYLVANIA									
Bradford								C. L. Peterson	Prevalent in a small way.
Erie		11,401	11,702		2.4	0.8		H. R. Steadman	
Do						25.0		do	High school
New Castle								W. L. Steen	Quite prevalent
Pittsburgh	4-21	43,555	54,218		33.16	50.92		H. J. Benz	
State							2-3.0	Goldberger and Aldinger	
RHODE ISLAND									
Newport								Edw. Murphy	Not common
Providence								S. D. Gage	Very few cases
Westerly								S. C. Webster	Not common
SOUTH CAROLINA									
Florence								P. H. Brigham	No appreciable number of cases.
TENNESSEE									
Gibson County							3.0	F. L. Roberts	Practically no goiter
Obion County				10,000			1	J. W. Dennis	
Rutherford County.				1,869			3.79	H. S. Mustard	White children.
Do				983			4.88	do	Colored children.
State								E. L. Bishop	Percentage low.
TEXAS									
El Paso								George Turner	No cases
Denison								Alex. W. Acheson	Extremely rare.
UTAH									
Alpine							57.0	J. F. McClendon	
Brigham City							29.0	do	
Farmington							54.5	do	
Fort Duchesne							71.7	do	
Goshen							15.0	do	
Huntsville							41.1	do	
Kansas							46.4	do	
Kaysville							49.1	do	
Lakeview							6.0	do	
Levan							73.4	do	
Logan City							40.5	do	
Millcreek							42.5	do	
Milford							23.0	do	
Mount Pleasant							58.6	do	
Murray							34.4	do	
Nephi							64.3	do	
Oak City							82.2	do	
Ogden							53.0	do	
Park City							42.2	do	
Parowan							69.1	do	

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 40 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
UTAH—Continued									
Payson							6 0	Curtis	
Salt Lake City							41 6	J F McClendon	
Santaquin							45 0	do	
Do							67 0	Curtis	
Syracuse							23 1	J F McClendon	
Vernal							10 8	do	
Virgin Valley						75 0		G W Middleton	Women
West Warren							7 1	J F McClendon	
Iron County							44 0	M J McFarlane	
Kane County	9–18	153	170		61.0	70 0		H J Sears	
Millard County	9–18	541	604		43 8	57 5		do	
Washington County	9–18	526	621		32 0	62 0		do	
10 counties				69,256		30 0	54 3	Board of health	
State				95,488			42 7	do	
Do	10–14			30,413	36 4	59 9		do	
Butler School							67 3	J F McClendon	
University of Utah				1,945	31 2	56 6		Porter	
VIRGINIA									
Lynchburg	5–19	2,380	2,967		6 0	15 9		M G Perrow	
Do	14–19	460	678		6 3	24.7		do	
Albemarle County								G B Young	Very little goiter
Arlington County				4,000			4 5	P M Chichester	
Fairfax County								W P Caton	Do
9 counties				6,432			12 7	Clark and Pierce	
52 counties							(2)	E G Williams	Circular letter, State board of health
34 counties							(3)	do	
83 counties							(4)	do	
WASHINGTON									
Montesano	11–18			159			27 04	D C Hall	
Do	5–14			466			23 42	do	
Seattle	5–14				42 0	48 0		do	
Do	14–18	575	521		38.3	65 6		do	
Tacoma	8–20			310			10 6	W J Kerr	Indians.
Chelan County	5–14			2,000			46 5	P T West	
Yakima County							46.0	H H Smith	Circular letters.
State	12–18				65 0	75.0		J. Tate Mason	Estimate.
Camp Lewis		21,182[1]			21 0			W J. Kerr	
University of Washington				13,000	26 37	33 2		D. C. Hall	1914.
WEST VIRGINIA									
Charleston						75.0		H. C Lonsberry	
Do						60 0		David Littlejohn.	
Grafton		949	949	1,898	8 6	24 5	16 5	C. C Hedges	
Do					36.0	64 0		David Littlejohn.	
Do					29 0	56.0		W T Henshaw	

[2] Goiter reported prevalent by 194 physicians (393 physicians reporting)
[3] Goiter reported somewhat prevalent by 44 physicians (234 physicians reporting).
[4] Goiter reported not present by 285 physicians (605 physicians reporting).

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 40 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
WEST VIRGINIA—Continued									
Ethel							59.0	David Littlejohn	
Huntington							50.0	do	
Logan							63.0	do	
Martinsburg							14.35	do	Adults
Montgomery							43.4	do	Colored
Do							21.0	do	White
Three Forks							53.0	do	
Gilmer County				720			97.0	H C Douglas	
Harrison County				6,704			25.1	V A Selby	
11 counties				13,836			8.91	Clark and Pierce	
WISCONSIN									
Altoona, Fairchild, and Augusta				531			31.0	L W Hutchcroft	
Ashland							90.0	Hertzman	
Barron City					35.0	47.0		V A Gudex	
Beloit						60.0		L M Field	Junior high school
Do						80.0		do	High School
Drummond								L W. Hutchcroft	17 students free of goiter.
Eau Claire	5-12	1,963	2,302		29.0	39.0		J F Farr	
La Crosse	7-12	3,126	3,232		12.0	23.6		V A Gudex and A M Murphy	
Lake Nebagamon							100.0	L W Hutchcroft	
Long Lake							75.0	A D. DeNeveu	
Marinette							44.46	L W Hutchcroft.	
Marshfield							65.0	do	
Menomonie	—12				22.0	50.0		V A Gudex	
Mercer				120			97.5	A V DeNeveu	
Monroe							83.3	Anna Stuppi	
Neenah							45.0	Ada Garvey	
Oshkosh							50.0	do	
Rhinelander							75.0	A V DeNeveu	
Stevens Point							60.0	F. A Southwick	
Do							8.0	do	Kindergarten
Do						58.0		do	Above kindergarten
Viroqua				26			69.2	G W Henika	Training school for teachers
Wausau								L F Bugbee	500 children in city with goiter
Eau Claire County							20.0	Mollie Smith	Rural schools
LaCrosse County							75.0	L W Hutchcroft	In some sections 95 per cent
Pepin County	12+			767	46.0	70.0		V A Gudex	
Polk County	12+			2,975	29.0	52.0		Karstens	
Alton Township							50.0	L W. Hutchcroft	
University of Wisconsin				13,706			28.0	R C Blankinship	1921.
Milwaukee Downer College	12-22		1,435			7-37		J G Taylor	14 States represented
WYOMING									
Natrona County				6,000			15.0	H Garst	
INDIANS									
25 localities							0.1-1.5	E L Munson	1895

REPORT OF THE COMMITTEE ON SANITARY CONTROL IN THE DEVELOPMENT OF GROUND-WATER SUPPLIES [1]

This report considers the sanitary defects affecting the safety of water obtained from various types of ground-water supplies and the safeguards which should be employed to remedy same Examples are given of towns in which epidemics have occurred due to the various defects It is of interest to note that a survey of engineering literature and correspondence incident to the preparation of this report revealed 40 authentic epidemics of typhoid, dysentery, or intestinal disorders, attributed to infection of ground-water supplies. This number is, of course, only a portion of all those which have occurred from this cause, but it serves to impress us with the urgent need of properly safeguarding our new and existing ground-water supplies against these known dangerous sanitary defects

The first epidemic of which we find record was that occurring at Mankato, Minn., in 1908, with 5,000 cases of diarrhea, 511 cases of typhoid, and 35 deaths. A decision of the Minnesota Supreme Court, arising from a suit brought on account of this epidemic, holds that a municipality is liable for sickness and deaths resulting from the pollution of the public water supply. Probably the largest epidemic was that occurring at Salem, Ohio, in 1920, resulting in 884 cases of typhoid and 27 deaths in a population of 10,000. The most recent large epidemic was that occurring in Santa Ana, Calif , in 1923, resulting in 308 cases of typhoid.

A code of principles summarizing the safeguards necessary to prevent pollution of ground-water supplies is attached to this report. References to articles describing the epidemics and others giving detailed discussions of the various sanitary hazards and safeguards are given in Appendixes A and B The detailed report outlining the various sanitary defects occurring on ground-water supplies and corresponding safeguards follows. For the purpose of this report, ground-water supplies are separated into the following four groups: Wells, springs, mine water, and infiltration galleries.

GENERAL

Defects common to all types of ground-water supplies include the following:

(1) Poor location of the source of a ground-water supply as to surface drainage, flooding in times of high water, and proximity to sources of surface or sewage contamination, such as streams,

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Members of the committee G W Putnam (chairman), H J Darcey, E. L. Filby, H. R Fullerton, E. D Rich, W. G Swendsen, and E. S Tisdale.

sewers, abandoned uncapped wells, sink holes, privy vaults, and pits, cesspools, sewage wells, and other leaching devices for sewage.

EPIDEMICS: Bad Axe, Mich.; Corning N. Y.; Watervliet, N. Y.; Walden, N. Y.; Bethlehem Mines, W. Va.; Tuscola, Ill.

SAFEGUARDS: These conditions should be remedied, according to the particular circumstances, by establishing a supply in a new location, by furnishing adequate surface protection and eliminating sources of sewage pollution, or by adequate treatment. Chlorination alone may be sufficient when the contamination is slight. All wells should be tightly capped before abandonment to prevent accidental contamination of a water-bearing stratum. Sewage wells are a menace and permissible only under exceptional circumstances. Shallow wells, springs, and infiltration galleries used as a source of municipal supply should preferably be located outside the built-up area of a town to remove them from sources of contamination. The sewer from a toilet in a pumping station should be constructed of cast-iron pipe for a distance of at least 50 feet from the source of supply, suction or gravity piping, or reservoir.

(2) Suction or gravity piping located so that a leak developing in same will permit contamination of the supply. Proximity to sewers or other sources of pollution is particularly dangerous.

EPIDEMICS: Salem, Ohio; Benson, Minn.; Martinsburg, W. Va.; South Pasadena, Calif.; Greenville, Ill.; pollution at St. Louis, Mich.

SAFEGUARDS: All suction piping in a pump room should be run exposed, well above the floor level. All gravity and suction lines located in the ground should be constructed with water-tight material and joints, preferably cast iron, and never with sewer pipe. These lines should be located at a safe distance from sources of pollution and tested frequently with pressure to determine tightness. All sources of pollution which would contaminate supply if lines leaked should be carefully determined. If sources of sewage pollution are within a dangerous distance or if the line leaks, the condition should be remedied as circumstances warrant, such as by removing source of pollution, changing location of pipe, repairing leaks, or providing purification. Gravity and suction lines passing through polluted streams should be avoided or continuous purification provided.

(3) Collecting or storage reservoir and receiving or suction well subject to contamination on account of improper location or construction.

EPIDEMICS: New Ulm, Minn., Brenham, Tex.

SAFEGUARDS: The reservoir location should be at a safe distance from sources of sewage pollution and safe from flooding. The reservoir should be of continuous concrete construction with water-tight bottom, sides, and top, using 4 to 8 pounds of hydrated lime per

sack of cement or an approved waterproofing preparation. Brick construction is unsatisfactory. All openings should be satisfactorily protected from dust, small animals, and willful pollution; providing manhole openings with raised edges and overlapping locked covers and pipe ventilators with openings screened and pointing down. Clean-out, drain, or overflow pipes should under no conditions be connected direct to a sewer or installed in a manner such that they will be subject to a back flow of surface water or sewage during high-water periods.

(4) Connection of a safe source of ground-water supply with a polluted water supply. Many times old forgotten piping permits pollution of the source of a safe supply. The connection of the source to a body of polluted water, protected from it only by the maintenance of a higher level, or other arrangement, is often the cause of contamination through careless operation.

EPIDEMICS. Schenectady, N Y ; Cochrane, Ontario

SAFEGUARD: Complete elimination of these connections.

WELLS

(5) The sanitary defects permitting the pollution of well supplies at the surface include the following:

(*a*) Connection of well pit or subground level pump room to a sewer or drain subject to back flow.

(*b*) Lack of adequate facilities for removing seepage or waste water from a well pit or pump room.

(*c*) Lack of a water-tight connection on cased wells to close the annular opening between the well casing and pump column (sometimes called drop pipe or suction pipe).

(*d*) Lack of a water-tight top for dug and bored wells.

(*e*) Failure to locate properly and protect the air inlet on air-lift pumping systems.

EPIDEMICS: Mankato, Minn.; Santa Ana, Calif.; Lansing, Mich.; Benson, Minn.; pollution at Montgomery, Ala.

SAFEGUARDS: (*a*) A well pit or subground level pump room should be avoided whenever practicable and the pumps installed on a pump-room floor located above the surrounding ground level.

(*b*) If conditions necessitate the installation of a well pit or subground-level pump room, the floor and walls should be made water-tight and drained to an open outlet (under no condition connected to a sewer), or a sump and automatic ejector should be provided to remove the waste water.

(*c*) The outside casing or curbing of wells should be extended above the level of the ground or floor of the pump room or pit, and a water-tight connection installed to close the annular opening between the well casing and pump column or drop pipe. Dug wells

should be provided with a water-tight cover, and the pump pipe, manhole, and other openings should be properly protected so as to prevent waste water or other contaminating material from entering the well. Pumping equipment should not be installed in the well in a manner requiring entrance of an attendant.

(*d*) On air-lift pumping system the air inlet should be properly located and protected to minimize the entrance of dust and other contaminating material.

A set of suggested regulations has been formulated covering the installation of well-pumping machinery for the benefit of consulting engineers, well and pump contractors, and manufacturers of pumping machinery, and is given in Appendix C.

(6) Sanitary defects permitting underground contamination of well supplies are as follows

(*a*) Failure to extend a water-tight outside well casing or curbing to a sufficient depth and to seal the bottom into a solid formation, permitting contaminated surface and shallow ground water or other pollution to drain into the well. This is found dangerous, particularly in strata consisting of limestone lava flows, and similar strata containing solution channels, fissures, faults, and sink holes in very porous formations, like coarse gravel, and in formations shattered by blasting operations.

Casing, curbing, collecting piping, and galleries constructed of wood, sheet metal, riveted steel or slip joint pipe, brick, porous concrete, and vitrified clay or concrete pipe with open joints are generally unsatisfactory. Riveted pipe may leak along seams or through rivet holes. The type of well in sand in which coarse gravel is fed in around a concrete casing to increase the yield is subject to similar vertical contamination through the gravel unless properly protected.

EPIDEMICS: Shallow wells: Assembly of Old Salem Chautauqua, Ill.; Healdsburg, Calif ; Centralia, Wash.; Brunswick, Mo.; Stonewall, Okla.; Pawhuska, Okla. Deep wells: Jonesboro, Tex ; Rockville, Md ; Monroe, Mich,; Monett, Mo.; Miller, Mo., school.

SAFEGUARDS: A water-tight outside casing or curbing should be installed, extending deep enough to prevent contaminated surface or shallow ground water or other pollution from entering the well through such strata. The bottom of the casing or curbing should be effectively sealed into a solid formation and thoroughly tested to make certain that contaminated water on the outside of the casing can not enter the well

Drilled wells.—Screw-joint steel or wrought-iron pipe is the standard well casing for drilled wells and can be installed water-tight tight when new. To prevent water of unsatisfactory sanitary or

mineral quality from draining down the annular space between the drill hole and the casing into the supply, a satisfactory seal should be made or installed at the bottom, such as the following:

(*a'*) Setting bottom of casing in drill cuttings of a cementing character on a shoulder in the well made by reducing the size of the drill hole

(*b'*) Driving casing into clay or shale or similar sealing formation.

(*c'*) Cement grout.

(*d'*) Lead packer.

(*e'*) Expanding rubber packer

The seal should be tested by bailing out the drill hole and making sure there is no leakage into same over a period of 48 hours. When no water has been encountered up to time of sealing, water should be run into annular space on outside of casing.

To install a casing in an old well it is usually necessary to ream out the drill hole to furnish a shoulder for the casing to seal into. Where a wall packer will make a tight joint between the bottom of the casing and drill hole, reaming is not required.

Dug or bored wells.—Concrete curbing and pipe are commonly used for these types of wells and can be made water-tight by careful selection of materials and construction. For concrete, make rich mixture, adding 4 to 8 pounds of hydrated lime per sack of cement or an approved waterproofing preparation; mix, pour, and puddle carefully. Vitrified clay or concrete pipe should be replaced with screw-joint wrought-iron casing or the joints made water-tight with an approved bituminous joint filler.

The safe vertical depth of soil in various formations is that which will effectively filter out surface bacterial pollution, and is conservatively as follows: Solid clay, 6 feet; fine sand, 12 feet, gravel, dry adobe soil, indefinite; fissured rock, no distance—water unsafe without treatment. Wells installed with a gravel wall should be protected by forcing into the space between the outside casing and well hole sufficient puddled clay to give a protective clay depth of at least 12 feet below the ground surface or any strata carrying contaminated water.

(*b*) Holes produced by corrosion in outside metal casing, above safe water-bearing stratum, are dangerous defects because they permit pollution of well water by seepage through same. The use of the outside well casing as a suction pipe, or as a discharge pipe in airlift or deep-well pumping, is a questionable practice, as leaks will develop in the casing above the static water level if the well water is corrosive.

EPIDEMICS. Abbot, Hamilton, Tex.; pollution due to this defect has occurred at Savannah, Ga., Whitewater, Wis., St. Francois County, Mo. (private wells), Carl Junction, Mo.

SAFEGUARDS: Corrosion of a casing can be prevented by installing a shell of cement grout around same, or reduced by using cast-iron or best grade strictly wrought-iron pipe with a double coating of bituminous material. At least a 2-inch annular opening between the casing couplings and drill hole is necessary to permit the installation of a suitable cement shell around the casing. This opening can be filled with cement grout through a 1¼-inch pipe, using a tank pump. In the case of an old well, a corroded casing must be removed and the drill hole must be reamed to the proper size to allow for the cement shell. Another method, which reduces the size of the well, is to install a smaller casing of light material inside the old one to furnish an inside form for the cement shell.

Where a well is to be pumped by a suction, air-lift, or deep-well pump the safe practice is to install a separate suction or discharge pipe inside the well casing rather than to use the outside well casing for this purpose

Frequent laboratory tests should be made of all water supplies, even though well safeguarded, and purification provided if tests show its desirability

SPRINGS

Contrary to the popular belief that nothing is purer than a clear, cold, spring supply, contamination of springs is found to be general in many sections of the country from one or both of the following defects:

(7) Inadequate surface protection. Failure properly to curb many springs results in the washing of surface water directly into them during rains. Failure to cover the spring reservoir or to maintain the overflow level above high-water level in an adjacent watercourse often results in flooding or backing up of surface water directly into the spring.

EPIDEMICS: Walnutport, Pa.; Straight Creek, Ky.; Spring Township, Center County, Pa.; serious pollution at Locust Grove, Salina, Spavinaw, Okla ; Cassville, Mo

SAFEGUARDS: A tight concrete curbing and top to the spring reservoir should be installed, with overflow above back-water level. All openings should be protected and locked, similar to storage reservoirs, to prevent access of animals or persons.

(8) Surface water or pollution reaching water-bearing strata. Springs in a country underlaid with limestone usually receive water of recent surface origin immediately following rains This is evidenced by the increased flow and milkiness or turbidity of the water. In many instances sink-holes and streams have been found to be connected directly to springs through solution channels in the limestone or a coarse gravel stratum. Water from springs in other

ground formations should also be regarded with suspicion. Even where the water is clear at all times, the quality of a spring supply is doubtful and should be checked by frequent bacteriological analyses

EPIDEMICS: Adairville, Harlan, and Versailles, Ky; Pierce City, Palmyra, and Springfield, Mo; serious pollution at Mount Vernon, Mo., Martinsburg, W. Va., Elizabethtown, and Russellville, Ky.

SAFEGUARDS. Adequate purification or treatment to fit the particular circumstances. Water from springs which becomes turbid should receive the same treatment as a surface water, namely, coagulation and settling, filtration and chlorination Some supplies may be safeguarded by careful chlorination, with sufficient storage capacity in a reservoir to supply clear water during a brief period of turbid flow. Spring supplies which are clear at all times may often require disinfection

MINE WATER

Many mines furnish water for municipal supplies Defects encountered include the following:

(9) Use of mine water without treatment, from portions of a mine being worked Very few mines are equipped with sanitary toilets, with the result that the mine water is badly contaminated with bowel discharges

Serious pollution occurred from this defect at Flat River, Mo.

SAFEGUARD: Adequate purification or treatment; coagulation, filtration, chlorination Due to the consistently low turbidity of mine water, pressure filters with a brief period of coagulation will often suffice.

(10) Flooding of special water supply drifts with general mine drainage Safe supplies are often obtained from isolated unused drifts which are closed off from the rest of the mine by suitable bulkheads Unless this bulkhead is water-tight, the drift is sometimes flooded with general mine drainage due to shutdown to repair pumps, etc., with resulting contamination of the normally safe supply.

SAFEGUARD: A water-tight concrete bulkhead should be constructed, providing water-tight manhole opening if one is necessary.

INFILTRATION GALLERIES

(11) Use of water from the majority of such supplies without treatment. Where the stratum is fine sand and the distance of water travel sufficient, safe water is obtained However, in many instances, water travels rapidly from a stream or other surface source through a stratum of gravel or a short distance through sand with fair to excellent removal of turbidity, but with unreliable bacterial removal. Further, the flooding of the infiltration well or gal-

lery usually changes the direction of flow, and while the horizontal distance may effect excellent bacterial removal the vertical distance is usually so short that the water reaching the gallery will not be purified.

Pollution due to this defect occurred at Des Moines, Iowa, and Austin, Tex.

SAFEGUARD: Adequate purification or treatment to fit the circumstances.

CONCLUSION

Experience indicates that there are many sanitary defects in connection with ground-water supplies which have in the past caused the intermittent infection of otherwise safe supplies, resulting in a great many serious epidemics with a large amount of sickness and loss of life The most common of these defects, together with safeguards which have been found effective, have been detailed in an effort to summarize past experience as a guide to future practice

In many instances difficulty in adequately safeguarding a ground-water supply amply justifies the continuous disinfection of the water as insurance against intermittent slight contamination. In other instances, complete purification is required, as with a surface supply.

With a clear understanding of the experience of the past the correction of sanitary defects on existing supplies, before the combination of circumstances arises which causes the infection of a supply and a resulting epidemic, is a matter of thoroughness of the field investigation and securing the necessary improvements by the responsible authorities. To prevent these same sanitary defects on future installations requires full understanding of them by city officials, designing engineers, well drillers, pumping equipment manufacturers, erectors, and construction men. The approval of plans controls this in a measure, but such plans are often changed in construction, so that a final inspection of all new construction work is necessary to make sure that some essential safeguard has not been left out by a careless erector.

Agreement on a code of principles on sanitary control in the development of ground-water supplies and regulations for the installation of well-pumping machinery would be welcomed by engineers, manufacturers, and contractors. The principal manufacturers of deep-well pumping equipment have already agreed to the "suggested regulations" submitted, have prepared a special erection drawing, and are favorable to furnishing a sanitary well-top seal to conform to these requirements if regulations are adopted.

Code of Principles on Sanitary Control in the Development of Ground-water Supplies

GENERAL

1. Sources of ground-water supplies should be located so as to prevent their contamination by surface drainage, flooding at times of high water, and by pollution resulting from proximity to sewers, privy vaults, cesspools, sewage wells, other leaching devices for sewage, streams, abandoned uncapped wells, sink holes, etc

2 Suction and gravity piping should be constructed with water-tight material and joint, preferably cast iron and never sewer pipe. These lines should be located at a safe distance from sources of pollution and tested frequently to determine their tightness

3 Collecting or storage reservoirs and suction wells should be carefully located, of waterproof construction, and covered. All manholes, vents, and overflow openings should be properly protected from dust, small animals, and willful pollution.

4. All connections between a safe source of supply and a polluted water supply should be effectively eliminated

WELLS

5. Well supplies should be protected from contamination at the surface by the following safeguards:

(*a*) A well pit or subground level pump room should be avoided wherever practicable, and the pumps installed on a pump-room floor located above the surrounding ground level.

(*b*) If conditions necessitate the installation of a well pit or subground level pump room, the floor and walls should be made water-tight and a drain to an open outlet (under no condition connected to a sewer), or a sump and automatic ejector, should be provided to remove the waste water.

(*c*) The outside casing or curbing of wells should be extended above the level of the ground or floor of the pump room or pit and a water-tight connection installed to close the annular opening between the well casing and pump column or drop pipe. Dug wells should be provided with a water-tight cover, and the pump pipe, manhole, and other openings should be properly protected so as to prevent waste water or other contaminating material from entering the well. Pumping equipment should not be installed in the well in a manner requiring entrance of an attendant.

(*d*) On air-lift pumping systems the air inlet should be properly located and protected to minimize the entrance of dust and other contaminating material.

6. Well supplies should be protected from underground contamination by the following safeguards:

(*a*) A water-tight outside casing or curbing should be installed, extending deep enough to prevent contaminated surface or shallow ground water or other pollution from entering the well through strata such as coarse gravel and limestone containing fissures, openings, and solution channels The bottom of the casing or curbing should be effectively sealed into a solid formation and thoroughly tested to make certain that contaminated water on the outside of the casing can not enter the well.

(*b*) Wells installed with a gravel wall should be protected by forcing into the space between the outside casing and well hole sufficient puddled clay to give a protective clay depth of at least 12 feet below the ground surface or any strata carrying contaminated water.

(*c*) Where the water is known to be or suspected of being corrosive, a metal well casing should be protected by providing a shell of cement grout, at least 2 inches thick around same An alternate method, suitable in some instances, is the use of a casing consisting of cast-iron or best grade strictly wrought-iron pipe with a double coating of bituminous material

(*d*) A separate suction or discharge pipe should be installed inside a well casing in all instances, whether the well is to be pumped by suction, air-lift, or deep-well pump.

7 Continuous purification or treatment should be provided to suit the circumstances where wells are not provided with the required sanitary safeguards as outlined above or where bacteriological or chemical tests or other conditions indicate that contamination is reaching the water-bearing strata.

SPRINGS

8 Springs should be protected from surface contamination by a waterproof concrete curbing and top. Springs which show analytical or field evidence of underground contamination with surface water or sewage should be effectively purified or treated.

MINE WATER

9. Water from mines subject to contamination or pollution requires adequate purification or treatment to make a safe supply. Special water-supply drifts located in mines should be protected from flooding and drainage from working shafts and drifts

INFILTRATION GALLERIES

10. Water from infiltration galleries should receive suitable purification or treatment unless located and operated so that satisfactory bacterial removal is secured.

APPENDIX A

Reports of Epidemics from Ground-water Supplies

Abbott, Tex , typhoid, 1924, correspondence, C. C Hays, city chemist, Waco.
Adairville, Ky , typhoid, 1924 correspondence, F. C Dugan
Assembly of Old Salem Chautauqua, typhoid, 1915, Journal A W W A , 3 874.
Austin, Tex., pollution, no epidemic; E N , 79. 355
Bad Axe, Mich , intestinal disorders, 1921, E N , 91· 138
Benson, Minn , typhoid 1914, Report Minnesota State Board of Health
Bethlehem Mines, W Va , typhoid, 1923. Report West Virginia State Board of Health
Brenham, Tex , typhoid, 1923, E N R , 92 947
Brunswick, Mo , typhoid, 1918. Report Missouri State Board of Health.
Clyde, Calif., pollution, no epidemic, correspondence, C. G Gillespie
Cochrane, Ontario, typhoid, 1923, E. N , 90. 714
Corning, N Y , typhoid, Journal A W W. A , 10 132
Des Moines, Iowa, pollution, no epidemic, E N , 82 1247
Elizabethtown, Ky . typhoid, correspondence, F C. Dugan.
Flat River, Mo , pollution, no epidemic, correspondence, G W Putnam.
Greenville, Ill , dysentery, January, 1925, Illinois Health News, 11· 3.
Hamilton, Tex , typhoid, 1924, correspondence, C. C Hays
Harlan, Ky , typhoid, 1922, correspondence, F. C. Dugan
Healdsburg, Calif , typhoid, 1914, E and C , 44: 179.
Jonesboro, Tex , typhoid, 1923, correspondence, C C Hays
Lansing. Mich , typhoid, 1919, E N , January 8, 1920
Locust Grove, Okla., pollution, no epidemic, correspondence, H J. Darcey
Mankato, Minn , typhoid, 1908, Journal A W W A , 7 20
Martinsburg, W. Va , typhoid endemic Report West Virginia State Board of Health
Memphis, Tenn , typhoid, 1912, 1919, Report on Water Supply, 1922, Fuller & McClintock
Miller (Mo.) School, typhoid, 1921, Report Missouri State Board of Health
Monett, Mo , typhoid, 1914, Report Missouri State Board of Health.
Monroe, Mich , pollution, no epidemic, correspondence, E D Rich.
Montgomery, Ala , pollution, no epidemic, 1920, Journal A. W W. A , 7· 171.
New Ulm, Minn , typhoid, 1914, Report Minnesota State Board of Health.
Pawhuska, Okla , typhoid, correspondence, H J. Darcey.
Pershing, Okla , pollution, no epidemic, correspondence, H J Darcey.
Pierce City, Mo , typhoid, 1914, correspondence, G. W. Putnam.
Rockville, Md , typhoid, 1914, Mun. Journal, 36. 428.
Russellville, Ky , typhoid, correspondence, F. C. Dugan.
St Louis, Mich , pollution, no epidemic, correspondence, E. D. Rich.
Salem, Ohio, typhoid, 1921, Journal N. E W W A., 1921, p 335.
Salina, Okla, pollution, no epidemic, correspondence, H. J. Darcey.
Santa Ana, Calif., typhoid, E. N R , March 6, 1924, volume 92, No 10
Savannah, Ga , pollution, no epidemic, Journal A W. W. A., 5: 260.
Schenectady, N. Y., typhoid, 1920, E and C., 54. 562
South Pasadena, Calif , typhoid, 1924, E. N. R , 92: 1018.
Spavinaw, Okla., pollution, no epidemic, correspondence, H. J. Darcey
Spring Township, Center County, Pa., typhoid, March, 1924, Bulletin Pennsylvania Department of Health, July, 1924.
Stonewall, Okla , typhoid, correspondence, H J. Darcey.
Straight Creek, Ky., dysentery, 1921, correspondence, F C. Dugan.

Tuscola, Ill , typhoid, 1916, correspondence, H. F Ferguson.
Versailles, Ky , typhoid, correspondence, F C Dugan
Walden, N Y , typhoid, 1913, Journal N. E W W A., 37: 33
Walnutport, Pa , typhoid, 1921, E N , 88 951.
Watervliet, N Y., local outbreak typhoid, Journal N E. W. W A , 37· 32.
Whitewater, Wis , pollution, no epidemic, E N , August 22, 1918

APPENDIX B

References to Articles Discussing Various Defects and Safeguards as Noted

Defect (1) Pollution of California water-supply wells by discharge from sewage wells. C G Hyde. E and C , 44 340
Defect (1) Protecting the underground water supply of Kearney, Nebr. H. H. Mole Waterworks E and C , 63 4, p 763
Defect (6*a*) University of Illinois well E N , 82 : 18–881
Defect (6*b*) Grouting wells—Wisconsin W. S Kirchoffer E N , August 22, 1918
Defect (6*b*) Sixteen-inch cast-iron well casing sunk by floating E N., 81 : 242.
Defect (6*b*) Special cast-iron lining of two large bore wells E and C , 50 · 172.
Defect (6*b*) Some features in artesian well construction in Mankato Journal, A W. W A , 5 163
Defect (9) Self-cleansing underground water-collecting system G T. Prince. E and C., 54 · 466
General—Protection of small water supplies used by railroads O E Brownell. Pub. Health Rep., 39 . 36
Some specific factors responsible for pollution or affecting analyses of water supplies H. A Whittaker. Pub Health Rep., 39 : 45.

APPENDIX C

Suggested Regulations Covering the Installation of Well-pumping Machinery

A. The use of a well-pit or subground-level pump room shall be avoided ~~wherever~~ practicable on account of the possibility of stoppage of the drain or ejector and neglect to replace the well-top seal after making repairs.

B. Where the pump head is installed without a pit—

1 The pump head shall be installed on a concrete base of sufficient height to permit the outside casing to extend at least 4 inches above the pump-room floor and to enable the installation of a suitable connection as under B–2.

2. The annular opening between the outside casing and pump column shall be closed by means of a suitable water-tight connection which will effectually prevent waste water, oil, or other contaminating material from entering the well.

C Where the pump head is installed with a pit or in a pump room below the ground level—

1 The sides and bottom of the pit or pump room below the ground level shall be constructed of water-tight concrete. It is preferable that the pit be left uncovered, surrounded by a railing, to permit easy inspection by the pump operator.

2 The annular opening between the outside casing and pump column shall be closed by means of a water-tight connection capable of withstanding for 24 hours without leakage, the water pressure resulting from complete filling of the pit with water The types of connections approved are given below in order of preference·

(*a*) An all-flanged or threaded connection.

(*b*) A stuffing-box connection.

(c) Metal to grouted cement connection with suitable gasket (not rubber), to be used only when joint carries weight of pump column and the pump head is rigidly supported to prevent vibration

Any vents provided for the well shall be extended by a pipe with screw or flange connections to a point above the floor level A return ell shall be screwed on the upper end of this pipe and screened.

3. Drainage shall be provided for the pump pit or pump room by one of the following methods:

(a) By means of a drain, consisting of a sewer pipe not less than 6 inches in diameter, with cemented joints, installed in a straight line and on an even grade of not less than 0 6 foot per 100 feet, with a concrete bulkhead at the outlet to insure an open discharge at all times; provided that under no conditions shall this drain receive sewage or be connected to a sewer and that the bottom of the pit so drained is above the high-water level in any adjacent watercourse

(b) By means of a pump or ejector drawing from a sump of not less than 12 cubic feet capacity situated so as to collect all waste water This pump or ejector should operate automatically or be connected to some moving part of the pump head so as to operate continuously with this pump This pump shall discharge above the pump-room floor level into a suitable drain at a point safely removed from the pump pit and pump room.

4. The bottom of the pit or pump room shall be sloped away from the top of the well casing toward the drain or sump with sufficient grade to insure ready flow At least 6 inches difference in elevation shall be provided between top of the well casing and high-water level in the sump.

THE DECREASE IN THE DEATH RATE AS A MEASURE OF PUBLIC-HEALTH WORK

Prof. C. Pirquet, of Vienna, has made a study of the declining death rate of England in an article appearing in the Monthly Epidemiological Report of the health section of the League of Nations for September 15, 1926 (fifth year, No 9) The following three paragraphs and table are quoted from this article as being of interest to all persons engaged in public-health work:

If we wish to form an exact idea of the progress made in connection with public health, we can scarcely find better evidence than that supplied by the English mortality statistics, which have been kept on uniform principles since 1838 and are published in the Statistical Review of the registrar general.

The figures indicated in the following table show the number of deaths in a calendar year per 10,000 persons of the corresponding age group living in that year.

Death rate according to age groups in the respective decades, 1841–1920

[Number of deaths per 10,000 per calendar year and age]

	0–5	5–10	10–15	15–20	20–25	25–35
1841–1850	660	90	53	75	93	103
1851–1860	676	85	50	70	87	98
1861–1870	[illegible]	80	45	64	82	98
1871–1880	634	65	37	51	71	90
1881–1890	568	53	30	44	56	76
1891–1900	577	43	25	37	47	64
1901–1910	460	36	21	30	38	51
1911–1920	[illegible]	35	22	(15–45)54		
	35–45	**45–55**	**55–65**	**65–75**	**75–85**	**Over 85**
1841–1850	129	170	293	636	1,415	3,010
1851–1860	123	165	289	617	1,399	2,965
1861–1870	127	174	304	628	1,404	2,966
1871–1880	127	178	316	630	1,422	3,083
1881–1890	115	171	314	650	1,376	2,840
1891–1900	105	168	315	650	1,372	2,708
1901–1910	83	143	281	568	1,272	2,608
1911–1920	(15–45)54	130	259	573	1,320	2,668

If we take the figure at the head of column 2, 90 indicates that from 1841 to 1850, on an average, 90 children between the ages of 5 and 10 per 10,000 died in each calendar year. The figure at the bottom of the second column, 35, indicates that from 1911 to 1920 only 35 deaths per 10,000 children between 5 and 10 occurred. The difference between these figures can be ascribed to the progress made in public health.

COURT DECISIONS RELATING TO PUBLIC HEALTH

Establishment and maintenance of isolation hospital in residence district not enjoined.—(California Supreme Court; Jardine *v* City of Pasadena, 248 p. 225; decided July 1, 1926.) The establishment and maintenance by the city of Pasadena of an isolation hospital in a residential district were sought to be enjoined by owners of property adjacent to the block selected as the hospital site. The court decided adversely, however, to the plaintiffs and refused to grant an injunction.

Damages for tuberculosis contracted because of working conditions denied.—(New York Supreme Court, Appellate Division; Wager *v*. White Star Candy Co., Inc., 217 N. Y. S. 173; decided July 2, 1926.) The plaintiff brought action to recover damages for illness from tuberculosis. The disease was alleged to have been contracted because of the insanitary conditions under which she worked. The court dismissed the complaint on the ground that the plaintiff, being fully aware of the conditions under which she worked and having continued in the employment for several months in spite of such knowledge, assumed the risk attendant upon her remaining in the employment.

Injunction to restrain city in its method of garbage disposal refused —(Louisiana Supreme Court; Gibson *v.* City of Baton Rouge, 109 So. 339; decided June 28, 1926) In a suit against the city of Baton Rouge by persons residing in the suburbs, complaint was made that the system of garbage disposal was offensive to their senses of sight, smell, and hearing, and that it interfered with their comfort and jeopardized their health. The court refused to issue an injunction restraining the city from disposing of its garbage by the only means and in the only way which seemed available, but also stated in the opinion that "we do not decide, and it is not now necessary for us to decide, that plaintiffs are without a remedy for such damages as they may suffer after due demand upon the city for the suppression of the noxious sights, smells, and noises, surrounding the garbage disposal plant herein complained of, and after reasonable time given in which to suppress them "

Certain product held not within act relating to butter substitutes.—(Illinois Appellate Court, First District; People *v* Waskow Butter Company, 239 Ill. App 604; decided March 2, 1926.) An Illinois law prohibited the coloring of "any substance designed as a substitute for butter, whereby such substitute * * * shall be made to resemble butter, the product of the dairy " The article under consideration in this case was made from coconut and peanut oils, salt, and harmless yellow coloring matter, and was not injurious to health It was sold in 1-pound, triangular paper packages, and was labeled as being a nut product prepared for cooking and baking and as containing coloring matter. It was distinguishable from butter at a distance of about 10 feet, and was not suitable for table use, and had a different odor and taste from butter. The court held that the act was not applicable to the product in question, stating as follows in the opinion:

A reasonable construction of the words of the Illinois act, "any substance designed as a substitute for butter," means a substance designed as a substitute for butter in all the usual and customary uses of butter. The act could not reasonably apply to a substance which can not be used for the largest and most usual use of butter—namely, as a spread on bread. A reasonable construction must take into account butter's major use and not alone its use for cooking We construe the language of the statute as nonapplicable to the nut product in question.

* * * * * * *

The evidence before us shows that the nut product contains no dairy products and there is no pretense in any of the advertising that it does It is represented only as a cooking compound, and it is not advertised as butter or as a substitute for butter, and the word "butter" is not used in the advertising. It is conceded by the plaintiff that the product was not designed to deceive or to be sold as butter or for butter. As no element of deception is alleged, proven or claimed, we hold that the prohibition of this article is not within the intent of the act

DEATH RATES IN A GROUP OF INSURED PERSONS

Rates for Principal Causes of Death for September, 1926

The accompanying table is taken from the Statistical Bulletin of the Metropolitan Life Insurance Co for October, 1926, and presents the mortality experience of the industrial insurance department of the company for the month of September, 1926, as compared with August, 1926, September, 1925, and the year 1925. The rates are based on the records of approximately 17,000,000 insured persons in the industrial populations of the United States and Canada.

The bulletin states.

Health conditions in September among the industrial populations of the United States and Canada showed a decided improvement as compared with the same month of 1925 The death rate this year was 8 1 per 1,000, which marks an improvement of approximately 6 per cent over the figure for September, 1925 (8 6) The September rate was slightly higher, as compared with August of this year, but the figures for both months are lower than the average for recent years

The advent of the fall season has been accompanied by the usual rise in the typhoid fever death rate, which almost doubled as compared with August The September figure, nevertheless, is lower than for the same month last year, and the mortality record for typhoid fever thus far in 1926 shows that the downward trend of the death rate, which has been prevailing for a long series of years, is still in evidence

Whooping cough had a higher death rate in September than the other three principal diseases of childhood—diphtheria, scarlet fever, and measles. It was the only one of these four diseases to show an above-average September death rate

The influenza death rate in September was only 4.6 per 100,000, which is slightly below the August figure and considerably below the rate for September, 1925. The mortality from pneumonia was virtually identical with that recorded for August, and considerably lower than the figure for September of last year. There were absolutely no signs, in September, pointing to unusual prevalence of influenza

Two other items of primary public health interest, namely, diarrheal diseases, and conditions incidental to pregnancy and childbirth, showed very gratifying declines as compared with September a year ago

In no single instance did any disease show a substantial increase as compared with last year.

During September there were 132 suicides, corresponding to a death rate of 9 per 100,000 This, with a single exception (May, 1923), is the highest suicide death rate recorded for any month among Metropolitan industrial policyholders. Automobile fatalities numbered 301, with a death rate of 20 5 per 100,000. This marks a high point for the months so far in 1926, and is, in fact, the highest rate recorded for any month since October, 1925.

Death rates (annual basis) for principal causes per 100,000 lives exposed, August and September, 1926, and September and year 1925

[Industrial department, Metropolitan Life Insurance Co]

Causes of death	Rate per 100,000 lives exposed [1]			
	Sept 1926	Aug, 1926	Sept, 1925	Year 1925
Total, all causes	814.2	785.8	859.9	907.5
Typhoid fever	8.4	4.8	8.8	4.6
Measles	1.9	3.1	.9	3.3
Scarlet fever	1.1	2.0	.9	3.5
Whooping cough	9.0	7.9	9.3	7.7
Diphtheria	6.5	5.7	7.6	10.6
Influenza	4.6	5.0	5.5	22.0
Tuberculosis (all forms)	89.6	80.0	88.8	98.1
Tuberculosis of respiratory system	79.1	75.3	76.9	85.9
Cancer	72.8	72.3	70.1	70.5
Diabetes mellitus	15.1	13.1	13.4	15.2
Cerebral hemorrhage	46.1	45.2	47.1	53.6
Organic diseases of heart	105.1	99.6	102.6	126.6
Pneumonia (all forms)	36.3	36.0	40.0	86.5
Other respiratory diseases	9.0	10.2	10.2	13.2
Diarrhea and enteritis	63.6	49.7	89.4	36.7
Bright's disease (chronic nephritis)	60.4	58.4	61.8	69.8
Puerperal state	11.5	13.2	14.6	16.5
Suicides	9.0	6.7	7.6	6.9
Homicides	6.5	6.2	8.2	7.2
Other external causes (excluding suicides and homicides)	68.5	70.6	70.8	64.3
Traumatism by automobiles	20.5	15.6	20.4	16.6
All other causes	189.1	187.3	202.2	190.7

[1] All figures include infants insured under one year of age

Death rates per 1,000 (annual basis), 1924, 1925, 1926, by months

[Industrial department, Metropolitan Life Insurance Co]

Month	1924	1925	1926	Month	1924	1925	1926
January	10.0	9.7	9.8	July	8.6	8.3	8.2
February	10.2	10.3	9.8	August	7.5	7.6	7.9
March	10.4	10.5	12.1	September	8.5	8.6	8.1
April	10.7	10.3	12.0	October	8.5	8.1	
May	9.5	9.0	9.1	November	7.9	8.2	
June	9.3	9.6	9.5	December	9.5	8.9	

NOTE.—Figures include mortality of infants under one year of age

PUBLIC HEALTH ENGINEERING ABSTRACTS

Practical Aspects of Plague in Wild Rodents. Wu Lien Teh. League of Nations' Health Organization, Geneva, 1925 October 7. C. H. 360, 19 pp. (37 refs.) (Abstracted by J. F. C. H.) From *Bulletin of Hygiene*, vol. 1, No 4, April, 1926, pp. 310–311.

"The author reviews available knowledge as to the mode of transmission of plague from one animal to another, from one settlement of animals to another, and from the various animals to man. He discusses the respective problems of California (ground squirrels), South Africa (gerbilles), South Russia (sisels or spermophiles and mice), and Transbaikalia and Mongolia (tarabagans). The failure of costly attempts at extermination of some of these animals is emphasized. Stress is laid upon the economic importance of the

tarabagan, which does not harm crops and is itself a chief means of sustenance to the population of a wide area He shows how it is only in the hunting and subsequent handling of tarabagans that risk of plague infection occurs, and how the prohibition of such hunting led to illicit trade and increased risk, and gives an outline of the measures of control proposed now that the regulation of the tarabagan trade has replaced prohibition. An appendix gives a revised list of rodents, other than the domestic rat and mouse, known to suffer from spontaneous plague (Cf. Kauntze's list for South Africa. *Bulletin of Hygiene*, vol 1, p. 66.)"

The Natural Enemies of Rats; Their Possibilities in Plague Prevention. G H. Goldfinch, with note by W H. Kauntze *Kenya M J*, 1925, vol 2, pp 225–234 (Abstracted by J F. C H.) From *Bulletin of Hygiene*, vol 1, No 4, April, 1926, p. 311.

"Stimulated by an article by Dr W H. Kauntze (*Bulletin of Hygiene*, vol 1, p 66), the author contributes an interesting but speculative paper in which a large number of different animals are considered as natural enemies of rats in Kenya Colony. He thinks the mole rat likely to be the most dangerous rodent as regards plague in that colony, and, among the many enemies of rodents considered, appears to favor the European little owl and the Indian mongoose for introduction to Kenya.

"Kauntze adds a note in which he points out that there are as yet insufficient facts upon which to base plans for Kenya, but that in South Africa the mole rat seems to escape plague. He has doubts, too, as to the ability of natural enemies to prevent the multiplication anew of rodents practically wiped out by plague, and points out that while the mongoose is perhaps more or less immune to plague he may yet spread it by means of his numerous fleas.

"(Neither Kauntze nor Goldfinch indicates the zoological position of the rodent spoken of as a 'mole rat.' Indeed, the latter says he can not remember whether it is a true rat or a vole. The 'mole rat' is not mentioned by that name in the booklet 'Rodents,' published by the health department of South Africa, but Wu Lien Teh (see summary on p. 310) quotes Mitchell as having described the 'mole rat *Cryptomys*' as plague infected)"

Earlier determination of bacterium coli. C. J. Lauter, *Water Works*, vol. 65, No. 9, September, 1926, pp. 451–453 (Abstract by E. A. Reinke.)

Research work at Washington filtration plant on use of brilliant green bile medium shows possibility of getting *B. coli* test results one or two days earlier than by use of present standard methods. A much higher percentage of confirmatives was obtained than with lactose. Samples of chlorinated effluent gave gas in lactose, but did not confirm and would not grow on bile Tables are given.

Night-soil disposal in unsewered areas. Anon The Sanitary Engineer Commission of Public Health, State of Victoria, Australia. *Health Bulletin* No. 4, October–December, 1925, pp 110–113. (Abstract by W. H. Wendler)

Due to the lack of constant water supply with adequate pressure, and also the scattered positions of the houses in rural communities, a sewerage system is out of the question, and other means of night-soil disposal must be relied upon Such means are fixed and movable receptacles, cesspools, and chemical closets. With all of these a great risk is taken of contaminating the local wells, streams, and other sources of water supply With these different methods of disposal great care must be taken with regard to flies, odors, and other conditions causing a nuisance

The most generally adopted mode of night-soil disposal is by earth burial. It is an accepted sanitary principle that putrescible refuse should be disposed of by shallow burial in soil whose upper layer is well drained, light, friable, sandy loam, capable under cultivation of supporting vegetation and in which nitrifying organisms can reside and flourish. It is not desirable to disinfect the night soil that is disposed of in this manner, as the germicidal matter destroys the nitrifying organisms. It is also undesirable to deposit night soil below a depth of 2 or 3 feet, as nitrification is believed to be confined to this depth. Air is of vital importance in the operation of the oxidizing organisms.

Experiments have shown that organic matter buried deep in the soil develops intense putrefaction and may remain in a potentially offensive condition for years. The size and arrangement of the trenches, in the case of municipal depots, should be under the supervision of the council's engineer

Ice cream as a cause of epidemics. Frederick W. Fabian, Associated Professor of Bacteriology and Hygiene, Michigan Agricultural Experiment Station, East Lansing, Mich *American Journal of Public Health,* vol. 16, No. 9, September, 1926, pp. 873–879. (Abstract by R. E. Irwin.)

To-day ice cream has become such a common article of diet that it should be taken into account by the epidemiologist when tracing an epidemic. The public-health official, if he has not already done so, will in the very near future need to regulate its sanitary quality.

References are given showing research work proving the very low temperatures at which pathogenic bacteria live in ice cream. Twenty-six epidemics traceable to ice cream are cited and references given.

The summary states: "It has been demonstrated by several investigators that exposure to the temperatures used in freezing and storing ice cream can not be relied upon to kill all pathogenic bacteria that may be present.

Numerous outbreaks of disease, such as typhoid fever, diphtheria, scarlet fever, diarrhea, and intestinal disturbances have been definitely traced to contaminated ice cream. It is believed that the same sanitary precautions should be taken by health officers, State and city boards of health, in protecting the ice-cream supply as are taken with the milk supply.

Three safeguards are suggested: (1) Pasteurizing the ice-cream mix at 150° F. for 30 minutes; (2) establishing a bacteriological standard 100,000 bacteria (colonies) per gram; (3) regular sanitary inspection of ice-cream plants"

The Pasteurization of milk and cream. J R. Corry. *Rhodesia Agric J*, 1925, vol 22, pp 940–948, 5 figs. (Abstracted by W. G. Savage) *Bulletin of Hygiene*, vol 1, No 4, April, 1926, p 279.

"Gives a useful description of the two methods of Pasteurization—i. e., the continuous process and the intermittent process, with illustration of common types of apparatus The author prefers the first process (often called 'flash' Pasteurization) as more practical where large amounts of milk and cream are handled, while in favor of the vat or intermittent process are the simplicity of construction, ease of operation, and economical working (The relative bacterial efficiency of the two processes is not discussed) He mentions that Pasteurization in bottles is rapidly gaining favor with dairies

"The author realizes the objection to Pasteurization in that it encourages careless methods of production and handling. While condemning such methods, he does so on bacteriological grounds which are not in accordance with English experience In his view the Pasteurization destroys the acid-producing bacteria, while the more harmful and more resistant types remain, so that dirty Pasteurized milk is still dangerous to the consumer. (Many putrefactive bacilli are destroyed at Pasteurization temperatures.)

"Pasteurization in the butter and cheese industry is strongly advocated, in that it makes possible the manufacture of a uniform product, it improves the keeping qualities of the article, it improves the flavor and aroma, and it destroys pathogenic organisms, making the product a safe and healthful food The author again emphasizes that even with Pasteurization cleanliness in the production of the raw material is essential."

An outbreak of anthrax contracted from handling infected beef. A. K. Mukerji. *Indian M Gaz.*, 1926, vol. 61, 22, 1 fig. (Abstracted by C. O. Stallybrass) From *Bulletin of Hygiene*, vol. 1, No. 5, May, 1926, p 349

"Seven persons in a village near Tipperah who had taken part in killing a cow, or in dressing the meat, were attacked with malignant pustules in various situations. Despite the absence of precautions,

no spread occurred to others who had not handled the meat. Four of the cases proved fatal."

Milk Pasteurization in Illinois in 1926. Lewis Shere, Milk Sanitarian, and Harry F Ferguson, Chief Sanitary Engineer, Illinois State Department of Health *Illinois Health News*, vol. 12, No. 9, September, 1926, pp. 317–333. (Abstract by I. W. Mendelsohn.)

The 1925 legislature enacted a milk Pasteurization-plant law with the following features: "(1) Pasteurization is defined as the process of heating milk or milk products to a temperature of at least 142° F. and holding at such temperature for not less than 30 minutes; (2) operators of Pasteurization plants shall apply to the State department of public health for a certificate of approval; (3) the State department of public health shall prepare minimum requirements for the construction, equipment, operation, and maintenance of Pasteurization plants; (4) certain provisions for the sanitary quality of the raw milk which is to be Pasteurized are made; (5) Pasteurization plants located in and supplying milk exclusively to cities having populations over 500,000 are exempted This actually exempts only Chicago and was made at the request of representatives of Chicago because it was considered that the city health department would undertake equivalent sanitary control under existing or new ordinances."

Some of the principal requirements adopted by the department are given. Preliminary inspections were made by the division of sanitary engineering in accordance with the law for the purpose of determining the conditions at the plants in regard to the construction, equipment, and operation, and especially to inform the owners wherein their plants did not comply with the law and the minimum requirements. These inspections were completed June 1, 1926, and showed: (1) In Illinois an estimated average of three-fourths of the milk is Pasteurized in cities with a population of 30,000 or over, exclusive of Chicago. In Chicago about 99 per cent of the milk supply is Pasteurized; (2) Pasteurization is more general in the larger than the smaller cities of Illinois. All of the cities having a population ranging from 25,000 to 100,000, and 85 per cent of the cities with a population of 10,000 to 25,000 have Pasteurization plants, whereas Pasteurized milk is available in only 2.6 per cent and 19 per cent of the cities with populations of less than 1,000 and between 1,000 and 5,000, respectively; (3) summary of number and volume of Pasteurization plants: Pasteurization plants, 306; cities having Pasteurization plants, 140; gallons Pasteurized daily (average), 337,778; total commercial Pasteurizers in milk plants, 449; average daily plant volume (gallons), 1,080; largest plant, daily volume (gallons), 24,000; smallest plant, daily volume (gallons), 25.

Illustrations are given of sanitary and insanitary types of equipment found, also table summarizing data regarding the investigation.

The more important problems requiring attention are: (1) Proper recording devices; (2) elimination of leaky valves; and (3) overcoming foaming and splashing.

The legal aspects of the stream pollution problem.—John H. Fertig, Pennsylvania Legislative Bureau. *American Journal of Public Health*, vol. 16, No. 8, August 1926, pp. 782–787. (Abstract by John H. O'Neill.)

The common law of the several States on the subject of stream pollution is to be found in many hundreds of adjudicated cases, and the whole intricate legal structure which has been developed by these cases rests in the end upon a few simple principles which are rather definitely settled.

The American common-law doctrine was derived from the French Code Napoleon rather than from the English common law. The original doctrine may be stated—that each riparian owner has the right to have a stream come down to him with its quality unimpaired and its quantity undiminished. At the present time this is an extreme statement and can not be literally accepted. There is not a property right in flowing water, it is not the subject of ownership but is subject simply to a reasonable, or, as it is usually called, a natural, use by the owner through whose land it flows. On the other hand, the right to use flowing water is not a mere easement, but is inseparably annexed to the soil and must be regarded as a property right.

Among the many cases which point out what is to be considered a natural and reasonable use of a stream are found as most common ones, domestic supply, swimming, pasturing of cattle, cultivation of lands, drainage of swamps, and the collection of surface water and its discharge into the water course which is the natural outlet. The natural use of a water course can not be supported if its use becomes immoderate. The distinction between that which is and that which is not a natural use is entirely a question of degree, and it is difficult to define the precise limits which separate the reasonable and permitted use of a stream from its wrongful application. The uniform customs of the community for generations may be of some significance in determining what is a reasonable or natural use of a stream, but is not conclusive upon the question. There are cases in which rights to pollute streams have been gained by custom or prescription and can be maintained as against riparian owners, but not as against the public.

There is need for the establishment of a firm and definite State policy with regard to pollution, for the adoption by the State of just and correct principles of legislation, and for more extensive cooperation between industry and the State.

The article contains an extensive list of references to court decisions illustrative of the principles presented.

DEATHS DURING WEEK ENDED NOVEMBER 13, 1926

Summary of information received by telegraph from industrial insurance companies for week ended November 13, 1926, and corresponding week of 1925 (From the Weekly Health Index, November 17, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Nov 13, 1926	Corresponding week, 1925
Policies in force	65, 619, 100	62, 053, 222
Number of death claims	11, 216	11, 502
Death claims per 1,000 policies in force, annual rate	8 9	9 7

Deaths from all causes in certain large cities of the United States during the week ended November 13, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, November 17, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Nov 13, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Nov 13, 1926 [2]
	Total deaths	Death rate [1]		Week ended Nov 13, 1926	Corresponding week, 1925	
Total (65 cities)	6, 737	12 2	12 6	697	755	[3] 59
Albany [4]	32	14.0	20 4	0	5	0
Atlanta	83			11	11	
White	40			3	5	
Colored	43	(5)		8	6	
Baltimore [4]	241	15 6	18 2	31	24	94
White	190			25	16	94
Colored	51	(5)		6	8	96
Birmingham	61	15.1	17 2	4	9	
White	34			4	3	
Colored	27	(5)		0	6	
Boston	203	13 4	15 6	22	35	61
Bridgeport	22			2	6	34
Buffalo	142	13 6	16 1	21	20	88
Cambridge	23	9 8	12.2	2	6	36
Camden	21	8 4	16 6	6	7	101
Canton	25	11.9	10 8	3	2	66
Chicago [4]	595	10 2	11 1	62	84	54
Cincinnati	120	15 2	18 6	9	12	56
Cleveland	189	10 3	10 7	20	25	52
Columbus	90	16 5	10.2	9	7	84
Dallas	47	12 3	15.4	2	8	
White	38			2	7	
Colored	9	(5)		0	1	
Denver	62	11.3	11 9	7	6	
Des Moines	45	16 1	10 0	8	3	131
Detroit	264	10 7	11 1	45	43	73
Duluth	18	8 3	6.6	2	2	46
El Paso	32	15.3	13 9	3	2	
Erie	27			3	6	59
Fall River [4]	36	14.3	12.9	2	8	31
Flint	30	11 4	8 4	4	3	68
Fort Worth	30	9.8	12.3	3	4	
White	23			3	4	
Colored	7	(5)		0	0	
Grand Rapids	28	9.4	11 3	1	4	14
Houston	81			7	5	
White	57			5	4	
Colored	24	(5)		2	1	
Indianapolis	99	14 1	13 8	9	9	68
White	86			8		70
Colored	13	(5)		1		57
Jersey City	74	12.1	11 1	7	4	53
Kansas City, Kans	20	8 9	13 5	2	3	39
White	14			2	2	45
Colored	6	(5)		0	1	0

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births Cities left blank are not in registration area for births.

[3] Data for 62 cities

[4] Deaths for week ended Friday, Nov. 12, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31, Baltimore, 15, Birmingham, 39, Dallas, 15; Fort Worth, 14; Houston, 25, Indianapolis, 11, Kansas City, Kans, 14, Louisville, 17, Memphis, 38; Nashville, 30, New Orleans, 26; Norfolk, 38, Richmond, 32 and Washington, D C, 25.

Deaths from all causes in certain large cities of the United States during the week ended November 13, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Nov 13, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Nov 13, 1926
	Total deaths	Death rate		Week ended Nov 13, 1926	Corresponding week, 1925	
Kansas City, Mo	103	14.3	15.6	13	10	
Los Angeles	250			23	23	64
Louisville	77	12.9	14.7	7	5	60
White	61			7	5	68
Colored	16	(5)		0	0	0
Lowell	20			3	4	58
Lynn	20	10.0	10.1	0	2	0
Memphis	59	17.4	16.7	8	7	
White	31			3	7	
Colored	28	(5)		5	0	
Milwaukee	109	11.0	11.1	9	18	42
Minneapolis	85	10.2	12.9	7	10	39
Nashville [4]	37	14.1	22.6	7	6	
White	18			5	3	
Colored	19	(5)		2	3	
New Bedford	30			5	3	87
New Haven	45	12.9	8.2	2	7	27
New Orleans	166	20.7	18.7	16	16	
White	97			8	13	
Colored	69	(5)		8	3	
New York	1 360	12.0	12.1	116	144	47
Bronx Borough	141	8.2	10.8	11	18	37
Brooklyn Borough	456	10.6	10.3	45	38	46
Manhattan Borough	598	16.6	16.3	48	70	53
Queens Borough	124	8.5	8.2	11	9	50
Richmond Borough	41	15.0	11.7	1	0	18
Newark, N J	112	12.7	10.7	14	20	67
Norfolk	37	11.1	8.6	7	1	141
White	18			2	1	65
Colored	19	(5)		5	0	265
Oakland	48	9.6	9.0	2	3	23
Oklahoma City	15			2	2	
Omaha	47	11.4	10.1	5	2	53
Paterson	23	8.4	9.6	3	3	51
Philadelphia	470	12.2	12.2	64	45	85
Pittsburgh	151	12.4	16.3	11	14	36
Portland, Oreg	76			5	2	50
Providence	60	11.4	12.5	3	9	25
Richmond	66	18.2	16.2	10	6	124
White	41			6	4	116
Colored	25	(5)		4	2	139
Rochester	67	10.9	11.2	6	5	48
St Louis	187	11.7	13.7	17	16	
St Paul	48	10.1	12.3	5	2	44
Salt Lake City [4]	39	15.3	12.7	7	6	106
San Antonio	48	12.2	16.3	4	7	
San Diego	32	15.2	13.8	1	3	21
San Francisco	138	12.7	13.4	4	3	24
Schenectady	25	14.0	9.0	7	1	201
Seattle	60			1	4	10
Somerville	17	8.9	8.4	1	1	28
Spokane	24	11.5	15.8	1	4	23
Springfield, Mass	31	11.1	11.0	3	1	46
Syracuse	41	11.6	12.6	4	6	51
Tacoma	30	14.8	10.5	3	1	71
Toledo	66	11.7	11.6	6	7	58
Trenton	47	18.3	10.3	4	0	68
Utica	20	10.1	13.9	4	4	91
Washington, D C	140	13.8	13.5	13	11	74
White	78			5	5	42
Colored	62	(5)		8	6	146
Waterbury	25			4	4	94
Wilmington, Del	39	16.4	6.0	6	0	133
Worcester	43	11.6	13.9	8	6	96
Yonkers	24	10.8	9.6	3	7	68
Youngstown	29	12.2	7.8	2	1	25

[4] Deaths for week ended Friday, Nov 12, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31, Baltimore, 15; Birmingham, 39, Dallas, 15, Fort Worth, 14, Houston, 25, Indianapolis, 11; Kansas City, Kans, 14; Louisville, 17, Memphis, 38, Nashville, 30; New Orleans, 26, Norfolk, 38, Richmond, 32, and Washington, D. C, 25

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended November 20, 1926

ALABAMA	Cases
Chicken pox	6
Diphtheria	120
Influenza	69
Lethargic encephalitis	3
Malaria	54
Measles	20
Mumps	4
Ophthalmia neonatorum	1
Pellagra	2
Pneumonia	51
Poliomyelitis	2
Scarlet fever	44
Smallpox	1
Tetanus	4
Trachoma	3
Tuberculosis	122
Typhoid fever	63
Typhus fever	1
Whooping cough	39

ARIZONA	Cases
Chicken pox	3
Diphtheria	2
Measles	2
Mumps	1
Scarlet fever	16
Trachoma	2
Tuberculosis	37
Typhoid fever	1

ARKANSAS	Cases
Chicken pox	8
Diphtheria	8
Hookworm disease	6
Influenza	61
Malaria	52
Measles	4

ARKANSAS—continued	Cases
Mumps	1
Pellagra	5
Scarlet fever	12
Tuberculosis	10
Typhoid fever	10
Whooping cough	31

CALIFORNIA	Cases
Chicken pox	308
Diphtheria	189
Influenza	17
Measles	776
Mumps	207
Poliomyelitis	
Glendale	1
Los Angeles County	3
Orange County	1
San Joaquin County	1
Scarlet fever	296
Smallpox	12
Tuberculosis	165
Typhoid fever	13
Whooping cough	97

COLORADO	Cases
Chicken pox	19
Diphtheria	9
Impetigo contagiosa	1
Influenza	2
Measles	12
Mumps	4
Pneumonia	4
Scarlet fever	59
Trachoma	1
Tuberculosis	17
Typhoid fever	9
Vincent's angina	5
Whooping cough	6

CONNECTICUT

	Cases
Cerebrospinal meningitis	2
Chicken pox	102
Diphtheria	34
German measles	3
Influenza	2
Measles	10
Mumps	6
Pneumonia (broncho)	20
Pneumonia (lobar)	32
Poliomyelitis	1
Scarlet fever	54
Septic sore throat	3
Tuberculosis (pulmonary)	22
Typhoid fever	2
Whooping cough	35

DELAWARE

Chicken pox	3
Diphtheria	2
Scarlet fever	17
Tuberculosis	2

FLORIDA

Chicken pox	4
Dengue	1
Diphtheria	47
Influenza	1
Malaria	1
Measles	9
Pneumonia	11
Scarlet fever	15
Smallpox	11
Tetanus	2
Tuberculosis	11
Typhoid fever	3
Typhus fever	1
Whooping cough	11

GEORGIA

Cerebrospinal meningitis	1
Chicken pox	14
Conjunctivitis	1
Diphtheria	88
Dysentery	2
Influenza	72
Malaria	22
Measles	5
Mumps	1
Paratyphoid fever	1
Pellagra	2
Pneumonia	21
Scarlet fever	15
Septic sore throat	7
Smallpox	13
Tuberculosis	15
Typhoid fever	22
Whooping cough	15

IDAHO

Chicken pox	6
Diphtheria	12
Measles	30
Scarlet fever	36
Tuberculosis	2
Typhoid fever	3

ILLINOIS

	Cases
Cerebrospinal meningitis—Cook County	2
Chicken pox	523
Diphtheria	139
Influenza	22
Lethargic encephalitis—Champaign County	1
Measles	289
Mumps	83
Pneumonia	268
Poliomyelitis	
Lawrence County	1
Macon County	2
Scarlet fever	269
Smallpox	9
Tuberculosis	257
Typhoid fever	53
Whooping cough	242

INDIANA

Cerebrospinal meningitis	1
Chicken pox	166
Diphtheria	104
Influenza	33
Measles	41
Mumps	1
Pneumonia	6
Poliomyelitis	1
Scarlet fever	188
Smallpox	83
Tuberculosis	71
Typhoid fever	12
Whooping cough	113

IOWA

Cerebrospinal meningitis	2
Chicken pox	82
Diphtheria	37
Measles	24
Mumps	4
Ophthalmia neonatorum	1
Scarlet fever	53
Smallpox	6
Tuberculosis	7
Typhoid fever	5
Whooping cough	11

KANSAS

Chicken pox	142
Diphtheria	29
German measles	1
Influenza	1
Measles	33
Mumps	14
Pneumonia	37
Scarlet fever	108
Smallpox	2
Tuberculosis	36
Typhoid fever	7
Whooping cough	62

LOUISIANA

Cerebrospinal meningitis	1
Diphtheria	52
Influenza	10

LOUISIANA—continued

	Cases
Malaria	12
Pneumonia	3[illegible]
Poliomyelitis	1
Scarlet fever	30
Smallpox	2
Tuberculosis	25
Typhoid fever	19
Whooping cough	9

MAINE

Cerebrospinal meningitis	1
Chicken pox	120
Diphtheria	6
German measles	2
Influenza	1
Measles	[illegible]3
Mumps	3
Pneumonia	3
Scarlet fever	[illegible]0
Tuberculosis	6
Typhoid fever	1
Vincent's angina	1
Whooping cough	88

MARYLAND[1]

Cerebrospinal meningitis	1
Chicken pox	182
Diphtheria	41
Dysentery	1
German measles	2
Influenza	16
Measles	42
Mumps	3
Paratyphoid fever	2
Pneumonia (broncho)	38
Pneumonia (lobar)	38
Scarlet fever	32
Septic sore throat	1
Tuberculosis	42
Typhoid fever	22
Vincent's angina	2
Whooping cough	79

MASSACHUSETTS

Anthrax	2
Cerebrospinal meningitis	2
Chicken pox	341
Conjunctivitis (suppurative)	7
Diphtheria	98
German measles	5
Influenza	7
Lethargic encephalitis	1
Measles	32
Mumps	134
Ophthalmia neonatorum	33
Pellagra	1
Pneumonia (lobar)	83
Poliomyelitis	4
Scarlet fever	305
Septic sore throat	2
Trachoma	1
Tuberculosis (pulmonary)	106
Tuberculosis (other forms)	23
Typhoid fever	8
Whooping cough	78

[1] Week ended Friday.

MICHIGAN

	Cases
Diphtheria	149
Measles	76
Pneumonia	106
Scarlet fever	259
Smallpox	28
Tuberculosis	31
Typhoid fever	7
Whooping cough	85

MINNESOTA

Chicken pox	256
Diphtheria	95
Influenza	2
Lethargic encephalitis	1
Measles	140
Pneumonia	1
Scarlet fever	221
Smallpox	4
Tuberculosis	11
Typhoid fever	1
Whooping cough	26

MISSISSIPPI

Diphtheria	24
Poliomyelitis	1
Scarlet fever	16
Smallpox	3
Typhoid fever	13

MISSOURI

Chicken pox	71
Diphtheria	76
Influenza	10
Measles	29
Mumps	11
Ophthalmia neonatorum	1
Pneumonia	13
Rabies (in animals)	3
Scarlet fever	106
Septic sore throat	7
Tuberculosis	47
Typhoid fever	8
Whooping cough	53

MONTANA

Chicken pox	27
Diphtheria	2
Measles	105
Mumps	6
Ophthalmia neonatorum	1
Scarlet fever	94
Smallpox	6
Tuberculosis	1
Whooping cough	4

NEBRASKA

Chicken pox	26
Diphtheria	6
German measles	1
Influenza	16
Measles	6
Mumps	6
Pneumonia	1
Poliomyelitis	1
Scarlet fever	32
Smallpox	11

NEBRASKA—continued

	Cases
Tuberculosis	1
Typhoid fever	5
Whooping cough	4

NEW JERSEY

Cerebrospinal meningitis	2
Chicken pox	198
Diphtheria	102
Influenza	13
Measles	31
Paratyphoid fever	1
Pneumonia	128
Poliomyelitis	4
Scarlet fever	122
Trachoma	1
Typhoid fever	32
Whooping cough	153

NEW MEXICO

Chicken pox	1
Diphtheria	1
German measles	1
Influenza	2
Malaria	2
Measles	1
Mumps	1
Pneumonia	7
Scarlet fever	56
Tuberculosis	24
Typhoid fever	18
Whooping cough	13

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	1
Chicken pox	505
Diphtheria	101
Dysentery	1
German measles	71
Influenza	6
Malaria	3
Measles	653
Mumps	162
Pneumonia	250
Poliomyelitis	6
Scarlet fever	175
Septic sore throat	6
Smallpox	17
Typhoid fever	23
Vincent's angina	9
Whooping cough	283

NORTH CAROLINA

Cerebrospinal meningitis	1
Chicken pox	125
Diphtheria	164
German measles	5
Malaria	5
Measles	9
Scarlet fever	132
Septic sore throat	7
Smallpox	31
Typhoid fever	23
Whooping cough	296

[2] Deaths

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Cerebrospinal meningitis—Seminole County	1
Chicken pox	10
Diphtheria	43
Influenza	173
Malaria	36
Pneumonia	70
Scarlet fever	32
Smallpox	
McCurtain County	33
Scattering	6
Tetanus—Carter County	1
Typhoid fever	54
Whooping cough	32

OREGON

Chicken pox	44
Diphtheria	24
Influenza	12
Measles	9
Mumps	16
Pneumonia	[2] 5
Scarlet fever	74
Smallpox	
Josephine County	9
Scattering	15
Tuberculosis	[2] 3
Typhoid fever	3

PENNSYLVANIA

Anthrax—Philadelphia	1
Chicken pox	690
Diphtheria	257
German measles	5
Impetigo contagiosa	16
Malaria	2
Measles	629
Mumps	39
Ophthalmia neonatorum	
Harrisburg	2
Pittsburgh	1
Pneumonia	54
Poliomyelitis	
Avondale	1
Philadelphia	1
Scabies	20
Scarlet fever	371
Smallpox	2
Tetanus—Philadelphia	1
Tuberculosis	55
Typhoid fever	65
Whooping cough	322

RHODE ISLAND

Chicken pox	3
Diphtheria	8
German measles	2
Measles	2
Mumps	1
Ophthalmia neonatorum	1
Pneumonia	8
Scarlet fever	20
Tuberculosis	10
Typhoid fever	2
Whooping cough	4

SOUTH DAKOTA

	Cases
Cerebrospinal meningitis	1
Chicken pox	15
Measles	53
Pneumonia	3
Scarlet fever	53
Trachoma	2
Whooping cough	10

TENNESSEE

	Cases
Chicken pox	31
Diphtheria	102
Influenza	51
Lethargic encephalitis—Loudon County	1
Malaria	13
Measles	12
Ophthalmia neonatorum	1
Pellagra	6
Pneumonia	57
Scarlet fever	94
Smallpox	2
Tuberculosis	25
Typhoid fever	48
Whooping cough	66

TEXAS

	Cases
Chicken pox	4
Diphtheria	101
Influenza	21
Measles	4
Mumps	7
Pellagra	20
Pneumonia	9
Scarlet fever	40
Smallpox	9
Tuberculosis	20
Typhoid fever	37
Whooping cough	11

UTAH

	Cases
Cerebrospinal meningitis—Ogden	1
Chicken pox	61
Diphtheria	14
German measles	28
Measles	246
Mumps	10
Pneumonia	10
Scarlet fever	25
Smallpox	2
Typhoid fever	1
Whooping cough	2

VERMONT

	Cases
Chicken pox	13
Diphtheria	1
Measles	178
Mumps	14
Poliomyelitis	1
Scarlet fever	3
Whooping cough	66

WASHINGTON

	Cases
Cerebrospinal meningitis	1
Chicken pox	179
Diphtheria	96
German measles	4
Measles	86
Mumps	15
Pneumonia	1
Scarlet fever	84
Septic sore throat	1
Smallpox	29
Tuberculosis	31
Typhoid fever	9
Whooping cough	21

WEST VIRGINIA

	Cases
Chicken pox	62
Diphtheria	64
Influenza	3
Measles	16
Scarlet fever	66
Smallpox	1
Tuberculosis	12
Typhoid fever	46
Whooping cough	83

WISCONSIN

	Cases
Milwaukee	
Cerebrospinal meningitis	4
Chicken pox	121
Diphtheria	20
German measles	1
Influenza	1
Measles	11
Mumps	33
Ophthalmia neonatorum	1
Pneumonia	18
Scarlet fever	17
Tuberculosis	15
Whooping cough	61
Scattering	
Chicken pox	228
Diphtheria	45
Influenza	41
Measles	368
Mumps	102
Pneumonia	12
Poliomyelitis	2
Scarlet fever	109
Smallpox	11
Tuberculosis	29
Typhoid fever	4
Whooping cough	111

WYOMING

	Cases
Cerebrospinal meningitis—Hot Springs County	1
Chicken pox	19
Diphtheria	1
Influenza	3
Measles	26
Mumps	6
Pneumonia	5
Scarlet fever	23
Septic sore throat	1
Tuberculosis	1
Whooping cough	17

Reports for Week Ended November 13, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	16
Diphtheria	68
Influenza	3
Pneumonia	16
Scarlet fever	20
Tuberculosis	17
Typhoid fever	3
Whooping cough	3

NORTH DAKOTA

	Cases
Chicken pox	31
Diphtheria	2
Measles	56
Mumps	4
Pneumonia	1
Scarlet fever	31
Smallpox	2
Trachoma	3
Typhoid fever	1
Whooping cough	14

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Chicken pox	15
Diphtheria	58
Influenza	147
Malaria	42

OKLAHOMA—continued

	Cases
Pneumonia	45
Poliomyelitis	
Kingfisher County	1
Texas County	1
Scarlet fever	36
Smallpox	
Cleveland County	18
McCurtain County	14
Typhoid fever	56
Whooping cough	30

SOUTH CAROLINA

	Cases
Chicken pox	42
Dengue	4
Diphtheria	113
Hookworm disease	32
Influenza	571
Malaria	396
Measles	1
Paratyphoid fever	3
Pellagra	29
Poliomyelitis	4
Scarlet fever	38
Smallpox	4
Tuberculosis	27
Typhoid fever	82
Whooping cough	44

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week.

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever[1]
August, 1926										
New Mexico	0	2	0	0	12	1	0	3	0	32
September, 1926										
New Mexico	0	12	1	19	6	1	0	14	8	46
October, 1926										
Indiana	3	470	106		100		9	448	53	232
Massachusetts	7	291	38	2	120	1	27	720	0	87
Michigan	0	787	7	3	111	2	34	669	34	93
New Jersey	6	405	9	1	48		6	330	0	106
New Mexico	1	17	0	8	5	1	0	52	1	101
New York	19	868	155	25	761		96	625	17	344
North Dakota	0	14	0		215		2	191	24	30
South Carolina	0	304	551	2,227	24	228	25	37	23	443
Tennessee	5	524	130	364	20	37	4	328	16	725
Wisconsin	6	172	94		562		12	290	29	28

[1] Including paratyphoid fever.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended November 6, 1926, 39 States reported 2,459 cases of diphtheria. For the week ended November 7, 1925, the same States reported 2,009 cases of this disease. One hundred cities, situated in all parts of the country and having an aggregate population of more than 30,400,000, reported 1,308 cases of diphtheria for the week ended November 6, 1926. Last year for the corresponding week they reported 923 cases. The estimated expectancy for these cities was 1,345 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-seven States reported 2,371 cases of measles for the week ended November 6, 1926, and 1,740 cases of this disease for the week ended November 7, 1925. One hundred cities reported 474 cases of measles for the week this year, and 856 cases last year.

Poliomyelitis.—The health officers of 40 States reported 61 cases of poliomyelitis for the week ended November 6, 1926 The same States reported 117 cases for the week ended November 7, 1925

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-nine States—this year, 2,885 cases; last year, 2,500 cases; 100 cities—this year, 1,103 cases; last year, 936 cases, estimated expectancy, 846 cases.

Smallpox.—For the week ended November 6, 1926, 39 States reported 246 cases of smallpox. Last year for the corresponding week they reported 265 cases. One hundred cities reported smallpox for the week as follows: 1926, 15 cases; 1925, 52 cases; estimated expectancy, 35 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—Seven hundred and fifty-five cases of typhoid fever were reported for the week ended November 6, 1926, by 39 States. For the corresponding week of 1925 the same States reported 853 cases of this disease One hundred cities reported 140 cases of typhoid fever for the week this year and 155 cases for the corresponding week last year. The estimated expectancy for these cities was 113 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 94 cities, with a population of more than 29,700,000, as follows: 1926, 634 deaths; 1925, 820 deaths.

City reports for week ended November 6, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	26	3	0	0	0	1	0	1
New Hampshire									
Concord	22,546	0	0	0	0	0	0	0	2
Manchester	83,097	0	4	0	0	1	0	0	1
Vermont									
Barre	10,008	3	0	0	0	0	15	0	0
Burlington	24,089	4	0	1	0	0	0	0	0
Massachusetts									
Boston	779,620	31	62	24	2	0	7	28	18
Fall River	128,993	2	5	3	2	2	1	2	1
Springfield	142,065	2	4	1	2	0	2	0	1
Worcester	190,757	21	8	3	1	1	1	0	5
Rhode Island									
Pawtucket	69,760	4	1	0	0	0	0	0	0
Providence	267,918	0	8	12	0	2	1	0	6
Connecticut									
Bridgeport	(1)	0	9	4	0	0	0	1	1
Hartford	160,197	1	9	1	2	0	0	1	1
New Haven	178,927	5	4	2	0	0	0	0	6
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	40	25	2	1	2	0	2	10
New York	5,873,356	122	179	149	29	11	8	40	138
Rochester	316,786	7	12	4	1	1	2	1	1
Syracuse	182,003	7	12	6	-------	0	6	1	3
New Jersey									
Camden	128,642	2	7	18	0	0	0	1	3
Newark	452,513	11	16	13	3	0	2	4	3
Trenton	132,020	0	6	3	0	0	0	0	3
Pennsylvania									
Philadelphia	1,979,364	112	76	71	-------	2	5	1	50
Pittsburgh	631,563	90	38	20	-------	2	9	0	16
Reading	112,707	3	5	0	-------	0	0	1	1
Scranton	142,266	0	5	3	-------	0	0	0	1
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	10	23	12	1	2	1	9	11
Cleveland	936,485	59	51	105	1	2	8	2	11
Columbus	279,836	0	6	21	0	1	1	0	6
Toledo	287,380	71	15	12	0	0	1	0	5
Indiana									
Fort Wayne	97,846	1	3	7	0	0	0	0	1
Indianapolis	358,819	34	12	41	0	0	0	0	12
South Bend	80,091	6	3	4	0	0	4	0	1
Terre Haute	71,071	3	3	1	0	0	0	0	5
Illinois									
Chicago	2,995,239	87	156	66	8	2	73	14	37
Peoria	81,564	14	2	1	0	1	0	0	6
Springfield	63,923	6	3	0	0	0	16	0	1

[1] No estimate made.

City reports for week ended November 6, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Michigan									
Detroit	1,245,824	97	70	120	4	2	6	11	25
Flint	130,316	19	12	10	0	0	0	0	2
Grand Rapids	153,698	0	8	2	0	0	1	0	1
Wisconsin									
Kenosha	50,891	6	3	0	0	0	0	2	1
Madison	46,385	6	1	1	0	0	0	0	0
Milwaukee	509,192	56	32	14	0	0	4	19	8
Racine	67,707	36	2	1	0	0	3	2	2
Superior	39,671	1	1	0	0	0	0	0	1
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	3	5	0	0	0	50	0	5
Minneapolis	425,435	99	31	35	0	1	2	1	7
St Paul	246,001	18	20	16	0	0	15	0	8
Iowa									
Davenport	52,469	0	2	0	0	-------	6	0	-------
Sioux City	76,411	19	2	3	0	-------	1	1	-------
Waterloo	36,771	19	1	1	0	-------	0	0	-------
Missouri									
Kansas City	367,481	27	15	11	2	2	1	2	9
St. Joseph	78,342	0	4	0	0	0	0	0	5
St. Louis	821,543	16	56	54	0	0	1	4	-------
North Dakota									
Fargo	26,403	18	0	0	0	0	0	2	0
South Dakota									
Aberdeen	15,036	5	0	0	0	-------	0	0	-------
Sioux Falls	30,127	0	1	0	0	-------	0	0	-------
Nebraska									
Lincoln	60,941	2	3	3	0	0	0	0	0
Omaha	211,768	4	11	4	0	0	3	1	4
Kansas.									
Topeka	55,411	4	3	1	0	0	0	0	0
Wichita	88,367	0	7	0	0	0	2	0	2
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	2	4	3	0	0	1	0	1
Maryland									
Baltimore	796,296	46	33	31	6	1	1	7	14
Cumberland	33,741	1	1	0	0	0	0	0	1
Frederick	12,035	0	1	1	0	0	0	0	0
District of Columbia									
Washington	497,906	5	23	36	0	0	1	0	9
Virginia									
Lynchburg	30,395	0	3	3	0	1	0	0	2
Norfolk	(1)	0	5	5	0	0	0	1	3
Richmond	186,403	0	19	28	0	4	6	0	9
Roanoke	58,208	0	5	10	0	0	0	0	1
West Virginia									
Charleston	49,019	0	4	1	0	0	0	0	1
Huntington	63,485	0	4	15	0	----	0	0	-------
Wheeling	56,208	15	4	0	0	0	0	0	1
North Carolina									
Raleigh	30,371	1	3	3	0	0	0	0	1
Wilmington	37,061	0	1	1	0	0	0	0	3
Winston-Salem	69,031	1	3	7	0	0	1	1	2
South Carolina									
Charleston	73,125	0	2	2	17	1	0	0	2
Columbia	41,225	0	2	5	0	0	0	0	0
Greenville	27,311	0	2	2	0	0	0	0	0
Georgia									
Atlanta	(1)	0	10	25	22	0	0	1	10
Brunswick	16,809	1	0	0	0	0	0	2	1
Savannah	93,134	0	4	2	7	1	0	0	1
Florida									
Miami	69,754	0	------	5	0	0	0	0	3
St. Petersburg	26,847	--------	0	--------	--------	0	--------	--------	0
Tampa	94,743	0	1	5	0	0	1	0	2

[1] No estimate made.

City reports for week ended November 6, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	0	3	8	0	0	0	0	2
Louisville	305,935	2	13	8	1	1	1	0	8
Tennessee									
Memphis	174,553	8	15	15	0	1	2	0	3
Nashville	136,220	2	5	19	0	2	0	0	1
Alabama									
Birmingham	205,670	2	6	13	9	0	1	0	3
Mobile	65,95[illegible]	0	2	4	0	0	1	0	2
Montgomery	46,481	0	2	15	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	31,643	0	1	2	0	-------	0	0	-------
Little Rock	74,216	0	4	0	0	-------	0	0	1
Louisiana									
New Orleans	114,493	1	13	15	3	7	2	0	9
Shreveport	57,857	0	1	5	0	0	0	0	3
Oklahoma									
Oklahoma City	(1)	0	5	2	0	0	0	0	1
Texas									
Dallas	194,450	0	14	25	3	2	0	2	2
Galveston	48,375	0	1	2	0	0	0	0	1
Houston	164,954	1	5	7	0	0	0	0	4
San Antonio	198,069	0	3	3	1	0	0	1	6
MOUNTAIN									
Montana									
Billings	17,971	12	0	0	0	0	18	0	1
Great Falls	29,883	22	1	0	0	0	0	0	1
Helena	12,037	-------	0	-------	-------	-------	-------	-------	-------
Missoula	12,668	1	0	0	0	0	0	0	3
Idaho									
Boise	23,042	3	0	0	0	0	0	0	0
Colorado									
Denver	280,911	11	15	14	-------	1	7	0	6
Pueblo	43,787	5	6	0	0	1	0	0	1
New Mexico									
Albuquerque	21,000	0	1	0	0	0	0	0	1
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	2
Utah:									
Salt Lake City	130,948	24	3	7	0	0	62	0	5
Nevada									
Reno	12,665	0	0	3	0	0	0	0	1
PACIFIC									
Washington									
Seattle	(1)	44	6	10	0	-------	3	19	-------
Spokane	108,897	27	4	4	0	-------	25	0	-------
Tacoma	104,455	20	9	21	0	0	0	0	0
Oregon									
Portland	282,383	14	11	3	0	1	8	3	7
California									
Los Angeles	(1)	18	40	60	2	1	6	4	13
Sacramento	72,260	0	2	0	0	0	12	7	0
San Francisco	557,530	34	17	12	1	1	71	40	1

[1] No estimate made.

City reports for week ended November 6, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine											
Portland	1	3	0	0	0	0	1	0	0	9	22
New Hampshire											
Concord	1	0	0	0	0	0	0	0	0	0	10
Manchester	1	0	0	0	0	0	0	0	0	0	12
Vermont											
Barre	0	0	0	0	0	0	0	0	0	7	2
Burlington	1	0	0	0	0	1	0	0	0	2	6
Massachusetts											
Boston	34	61	0	0	0	10	3	6	0	9	185
Fall River	2	2	0	0	0	2	1	0	0	2	28
Springfield	7	1	0	0	0	3	0	0	0	4	27
Worcester	9	11	0	0	0	1	0	0	0	15	41
Rhode Island											
Pawtucket	0	0	0	0	0	1	0	0	0	1	19
Providence	5	8	0	0	0	5	1	1	0	2	55
Connecticut											
Bridgeport	6	17	0	0	0	0	0	0	0	0	26
Hartford	5	2	0	0	0	1	0	0	0	12	27
New Haven	5	7	0	0	0	2	2	0	0	0	38
MIDDLE ATLANTIC											
New York											
Buffalo	17	5	0	0	0	6	2	4	1	14	137
New York	79	97	0	0	0	[1] 91	22	12	1	48	1,260
Rochester	6	3	0	0	0	3	1	1	0	4	63
Syracuse	10	3	0	0	0	2	1	0	0	8	41
New Jersey											
Camden	3	1	0	0	0	1	0	1	0	5	35
Newark	11	10	0	0	0	5	2	2	0	14	97
Trenton	1	0	0	0	0	2	1	1	0	5	40
Pennsylvania											
Philadelphia	58	50	1	0	0	34	8	2	2	24	478
Pittsburgh	37	17	0	0	0	11	2	1	2	5	125
Reading	1	2	0	0	0	1	0	1	0	11	23
Scranton	2	10	0	0	0	1	0	0	0	2	31
EAST NORTH CENTRAL											
Ohio											
Cincinnati	12	10	0	0	0	11	1	1	0	1	128
Cleveland	23	18	0	0	0	19	3	3	2	34	190
Columbus	9	10	0	2	0	8	1	0	1	3	79
Toledo	11	11	0	0	0	7	1	0	1	27	89
Indiana											
Fort Wayne	1	1	0	0	0	0	1	0	0	0	20
Indianapolis	9	22	2	7	0	5	1	4	0	24	87
South Bend	3	4	1	0	0	0	1	1	0	1	14
Terre Haute	3	6	0	0	0	1	0	0	0	0	20
Illinois											
Chicago	97	88	1	0	0	41	7	2	2	55	601
Peoria	8	3	0	0	0	0	0	0	0	4	25
Springfield	2	0	0	0	0	0	1	0	0	3	13
Michigan											
Detroit	61	76	2	0	0	17	3	6	0	45	283
Flint	9	7	0	0	0	1	0	0	0	3	24
Grand Rapids	9	8	0	0	0	0	0	1	0	0	34
Wisconsin											
Kenosha	2	1	1	0	0	0	1	1	0	9	7
Madison	1	5	0	0	0	0	0	1	0	0	--------
Milwaukee	22	20	3	0	0	7	1	0	0	71	100
Racine	4	1	1	0	0	1	0	0	0	6	11
Superior	2	1	1	0	0	0	0	0	0	0	12
WEST NORTH CENTRAL											
Minnesota:											
Duluth	5	17	0	0	0	1	0	0	0	0	24
Minneapolis	36	87	1	0	0	2	1	1	0	1	83
St. Paul	15	22	5	0	0	2	0	0	0	7	62

[1] Pulmonary tuberculosis only.

City reports for week ended November 6, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL—contd											
Iowa											
Davenport	1	2	0	0	-------	-------	0	0	-------	0	-------
Sioux City	3	7	1	0	-------	-------	0	0	-------	1	-------
Waterloo	2	1	1	0	-------	-------	0	0	-------	3	-------
Missouri											
Kansas City	11	3	0	1	0	6	2	2	1	6	92
St Joseph	3	1	0	0	0	0	1	0	0	2	21
St Louis	34	33	0	0	0	7	3	7	0	20	206
North Dakota											
Fargo	2	6	0	0	0	0	0	0	0	1	9
South Dakota											
Aberdeen	0	6	0	1	-------	-------	0	0	-------	2	-------
Sioux Falls	2	2	0	1	0	0	0	0	0	0	-------
Nebraska											
Lincoln	1	4	0	0	0	0	0	1	0	4	12
Omaha	4	10	2	0	0	5	0	0	0	1	43
Kansas											
Topeka	3	0	0	0	0	0	1	1	1	6	16
Wichita	3	19	0	0	0	0	0	2	1	2	28
SOUTH ATLANTIC											
Delaware											
Wilmington	4	18	0	0	0	1	1	0	0	3	26
Maryland											
Baltimore	14	18	0	0	0	14	5	5	1	45	193
Cumberland	1	0	0	0	0	0	1	0	1	1	11
Frederick	0	3	0	0	0	0	0	0	0	0	1
District of Columbia											
Washington	15	6	0	0	0	9	3	2	0	1	131
Virginia											
Lynchburg	1	5	0	0	0	2	0	4	1	0	13
Norfolk	1	6	0	0	0	3	0	3	0	4	-------
Richmond	9	7	0	0	0	2	1	0	0	0	68
Roanoke	3	10	0	0	0	0	1	0	2	0	19
West Virginia											
Charleston	1	2	0	0	0	2	0	0	0	0	19
Huntington	2	13	0	0	-------	-------	0	0	-------	0	-------
Wheeling	3	1	0	0	0	0	1	4	1	3	16
North Carolina											
Raleigh	2	4	0	0	0	1	0	1	1	13	14
Wilmington	1	0	0	0	0	0	0	0	0	2	8
Winston-Salem	2	8	0	0	0	0	0	1	0	5	21
South Carolina											
Charleston	1	1	0	0	0	2	0	0	0	0	20
Columbia	1	5	0	0	0	0	0	0	0	0	-------
Greenville	1	0	0	0	0	0	0	0	0	0	3
Georgia											
Atlanta	6	12	0	0	0	3	1	3	0	0	73
Brunswick	0	0	0	0	0	0	0	0	0	0	4
Savannah	1	0	0	0	0	3	0	0	0	1	28
Florida											
Miami	-------	1	-------	0	0	0	-------	0	0	9	42
St Petersburg	0	-------	0	-------	0	0	0	-------	0	-------	16
Tampa	0	0	0	0	0	3	0	1	0	0	29
EAST SOUTH CENTRAL											
Kentucky											
Covington	2	3	0	0	0	1	0	0	0	0	21
Louisville	4	12	0	1	0	2	2	1	0	8	75
Tennessee											
Memphis	5	20	0	0	0	3	2	3	0	16	59
Nashville	4	10	0	0	0	5	2	10	1	5	63
Alabama											
Birmingham	4	0	0	1	0	4	2	6	1	0	47
Mobile	1	2	0	0	0	3	0	0	1	0	24
Montgomery	1	1	0	0	0	0	0	0	0	0	19

City reports for week ended November 6, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	0	0			0	0		6	
Little Rock	2	2	0	0		3	1	0		0	
Louisiana											
New Orleans	5	9	0	0	0	10	3	1	0	2	153
Shreveport	1	0	0	2	0	6	1	0	0	0	23
Oklahoma											
Oklahoma City	2	2	0	0	0	0	1	1	0	0	32
Texas											
Dallas	4	14	0	0	0	4	1	0	0	0	46
Galveston	1	0	0	0	0	0	0	0	0	0	17
Houston	1	1	0	0	0	4	0	0	0	0	48
San Antonio	1	0	0	0	0	7	0	4	1	0	44
MOUNTAIN											
Montana:											
Billings	1	1	0	0	0	1	0	0	0	0	7
Great Falls	1	2	0	0	0	0	0	0	0	0	6
Helena	0		0				0				
Missoula	0	14	0	0	0	0	0	0	0	0	5
Idaho											
Boise	1	2	1	0	0	0	0	0	0	0	
Colorado											
Denver	8	42	2	0	0	5	1	1	0	0	79
Pueblo	1	1	0	0	0	0	1	0	0	0	7
New Mexico											
Albuquerque	0	2	0	0	0	3	1	0	0	0	17
Arizona											
Phoenix	2	0	0	0	0	5	0	0	0	0	17
Utah:											
Salt Lake City	2	2	0	0	0	0	1	0	0	1	33
Nevada:											
Reno	0	0	0	0	0	0	0	0	0	0	4
PACIFIC											
Washington:											
Seattle	8	5	3	0			1	6		2	
Spokane	7	10	2	0			0	5		2	
Tacoma	2	4	1	1	0	0	1	0	0	1	24
Oregon											
Portland	8	18	8	3	0	0	1	1	0	1	66
California											
Los Angeles	16	39	3	0	0	30	3	1	0	1	225
Sacramento	1	4	1	0	0	3	1	2	1	0	26
San Francisco	8	14	0	0	0	4	1	3	0	10	114

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis: Cases	Poliomyelitis: Deaths
NEW ENGLAND									
Vermont									
Burlington	0	1	0	0	0	0	0	0	0
Massachusetts									
Boston	1	1	0	0	0	0	1	1	1
MIDDLE ATLANTIC									
New York.									
New York [1]	4	1	2	0	0	0	7	5	1
Pennsylvania: [1]									
Philadelphia	1	0	1	1	0	0	0	0	0

[1] Rabies, (human) 1 case and 1 death at New York, N. Y., and 1 death at Pittsburgh, Pa.

City reports for week ended November 6, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio									
Cleveland	0	0	1	1	0	0	0	0	0
Toledo	0	0	0	0	0	0	0	1	0
Illinois									
Chicago	0	0	1	1	1	1	2	2	0
Michigan									
Detroit	1	0	3	1	0	0	1	0	0
WEST NORTH CENTRAL									
Missouri									
Kansas City	0	0	1	1	0	0	0	0	0
St Louis	1	1	0	0	0	0	0	0	0
Nebraska									
Omaha	0	0	0	0	0	0	0	1	0
SOUTH ATLANTIC									
Maryland									
Baltimore	0	1	0	0	0	0	0	1	0
District of Columbia									
Washington	0	0	0	0	1	0	0	1	1
Virginia									
Richmond	0	0	0	0	0	0	0	1	1
North Carolina									
Raleigh	0	0	0	0	0	2	0	0	0
South Carolina									
Columbia	1	0	0	0	0	0	0	0	0
Georgia:[2]									
Brunswick	0	0	0	0	1	0	0	0	0
Florida									
St Petersburg	0	0	0	0	0	1	0	0	0
EAST SOUTH CENTRAL									
Kentucky									
Louisville	0	0	1	1	0	0	0	0	0
Alabama:									
Birmingham	0	0	2	1	0	0	0	1	1
WEST SOUTH CENTRAL									
Arkansas:									
Little Rock	0	0	0	0	0	1	0	0	0
Louisiana									
New Orleans	0	0	1	0	0	0	0	0	0
Texas									
Dallas	0	0	0	0	1	1	0	0	0
MOUNTAIN									
Colorado:									
Denver	0	0	0	0	0	0	0	1	0
PACIFIC									
Washington									
Seattle	1	0	0	0	0	0	0	0	0
Spokane	1	0	0	0	0	0	0	0	0
Oregon									
Portland	0	0	0	0	0	0	0	1	0
California									
Los Angeles	0	0	0	0	0	0	1	1	0
San Francisco	0	0	0	0	1	0	1	0	0

[2] Typhus fever; 1 case at Atlanta, Ga

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended November 6, 1926, compared with those for a like period ended November 7, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities

reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, October 3 to November 6, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926
101 cities	134	159	150	165	[2] 163	203	[3] 176	[4] 213	161	[3] 224
New England	96	66	120	85	[5] 94	85	132	106	93	118
Middle Atlantic	114	118	129	100	128	122	148	138	125	142
East North Central	153	188	166	219	180	261	186	[4] 244	178	276
West North Central	198	177	233	209	256	240	278	264	264	252
South Atlantic	179	216	209	218	[6] 252	302	213	357	198	319
East South Central	89	254	89	270	100	400	89	384	126	425
West South Central	79	176	88	219	101	280	251	331	189	254
Mountain	194	173	157	164	361	255	[3] 170	155	277	[3] 223
Pacific	102	200	105	175	135	191	149	205	141	288

MEASLES CASE RATES

	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926
101 cities	53	31	67	43	[2] 91	49	[3] 102	[4] 61	149	[3] 81
New England	371	33	431	26	[5] 578	26	582	24	822	66
Middle Atlantic	47	11	65	9	87	12	110	13	159	16
East North Central	24	29	24	36	45	47	54	[4] 69	70	80
West North Central	6	26	10	44	10	42	12	85	14	151
South Atlantic	15	15	52	21	[6] 37	26	56	9	144	21
East South Central	11	5	5	0	37	21	16	21	16	26
West South Central	0	0	0	13	13	4	4	0	9	9
Mountain	37	109	18	237	28	337	[3] 19	391	37	[3] 809
Pacific	11	181	28	291	11	278	14	342	17	315

SCARLET FEVER CASE RATES

	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926
101 cities	92	111	121	130	[2] 127	152	[3] 155	[4] 168	163	[3] 189
New England	105	144	127	144	[5] 125	194	194	246	261	265
Middle Atlantic	65	57	75	62	96	51	106	92	110	94
East North Central	109	121	143	132	135	155	185	[4] 155	159	189
West North Central	119	215	256	318	284	373	292	354	358	415
South Atlantic	92	100	129	126	[6] 126	163	180	133	173	199
East South Central	121	145	142	145	121	223	74	332	100	249
West South Central	62	69	53	86	40	95	40	112	97	112
Mountain	148	300	46	264	111	446	[3] 189	364	166	[3] 595
Pacific	102	159	135	205	127	235	141	237	155	205

SMALLPOX CASE RATES

	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926
101 cities	5	3	8	4	[2] 7	3	[3] 10	[4] 3	9	[3] 3
New England	0	0	0	0	[5] 7	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	1	1	8	3	4	3	16	[4] 1	12	6
West North Central	10	2	0	6	4	0	25	2	10	2
South Atlantic	6	0	6	4	[6] 0	9	6	6	12	0
East South Central	16	10	42	0	5	10	5	5	26	10
West South Central	0	4	0	4	0	0	0	4	0	9
Mountain	9	9	28	9	9	0	[3] 9	9	18	[3] 0
Pacific	44	19	55	32	75	16	44	22	47	3

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively
[2] Barre, Vt., and Winston-Salem, N C., not included.
[3] Helena, Mont., not included.
[4] Milwaukee, Wis , not included
[5] Barre, Vt., not included
[6] Winston-Salem, N. C , not included.

Summary of weekly reports from cities, October 3 to November 6, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct. 31, 1925	Oct 30, 1926	Nov. 7, 1925	Nov 6, 1926
101 cities	36	33	35	32	[2] 32	26	[3] 25	[4] 28	27	[3] 24
New England	26	17	24	57	[5] 14	19	17	12	22	17
Middle Atlantic	31	27	28	26	25	20	21	14	12	12
East North Central	21	23	31	15	9	13	15	[4] 18	18	13
West North Central	33	22	20	14	33	22	18	24	31	26
South Atlantic	52	77	65	66	[6] 73	77	25	75	60	45
East South Central	163	145	121	140	147	99	100	140	168	104
West South Central	57	22	44	26	79	22	79	39	48	22
Mountain	120	64	46	46	65	27	[3] 85	46	37	[3] 93
Pacific	8	22	19	16	30	13	19	19	8	46

INFLUENZA DEATH RATES

	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct. 31, 1925	Oct 30, 1926	Nov. 7, 1925	Nov 6, 1926
95 cities	3	4	6	6	[2] 8	7	[3] 10	[4] 11	13	[3] 11
New England	0	0	0	5	[5] 2	7	12	7	5	12
Middle Atlantic	3	3	5	4	8	8	10	8	14	9
East North Central	3	2	8	2	9	5	7	[4] 15	11	6
West North Central	4	6	6	11	6	2	11	2	6	6
South Atlantic	2	6	2	8	[6] 2	8	6	21	17	15
East South Central	0	5	16	16	5	10	26	10	37	21
West South Central	15	14	10	14	19	14	34	24	15	43
Mountain	9	18	0	27	37	27	[3] 9	9	9	[3] 19
Pacific	0	0	11	11	4	0	4	7	15	7

PNEUMONIA DEATH RATES

	Oct 10, 1925	Oct 9, 1926	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct. 31, 1925	Oct 30, 1926	Nov. 7, 1925	Nov 6, 1926
95 cities	63	64	90	77	[2] 88	85	[3] 117	[4] 96	133	[3] 101
New England	58	33	93	76	[5] 87	83	108	99	134	99
Middle Atlantic	63	76	94	88	89	104	136	101	143	113
East North Central	61	54	89	63	79	60	114	[4] 86	119	84
West North Central	45	63	58	53	60	49	97	63	86	84
South Atlantic	71	60	121	88	[6] 116	113	129	107	194	120
East South Central	110	83	95	52	121	99	105	135	152	99
West South Central	63	94	53	104	111	57	116	80	150	118
Mountain	92	55	120	118	111	127	[3] 76	182	102	[3] 167
Pacific	51	53	80	82	76	99	47	89	91	50

[2] Barre, Vt, and Winston-Salem, N C, not included
[3] Helena, Mont, not included
[4] Milwaukee, Wis, not included
[5] Barre, Vt., not included
[6] Winston-Salem, N C, not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10 346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended October 30, 1926.—The following report for the week ended October 30, 1926, was transmitted by the Eastern Bureau of the Secretariat of the Health Section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague Cases	Plague Deaths	Cholera Cases	Cholera Deaths	Smallpox Cases	Smallpox Deaths
Mauritius: Port Louis	4	3	0	0	0	0
Union of South Africa						
Durban	0	0	0	0	11	----
British India.						
Bombay	----	0	----	0	3	0
Madras	----	0	----	0	1	0
Rangoon	----	1	----	0	0	0
Karachi	----	0	----	0	1	0
Tuticorin	----	0	----	0	1	0

Maritime towns	Plague Cases	Plague Deaths	Cholera Cases	Cholera Deaths	Smallpox Cases	Smallpox Deaths
Dutch East Indies						
Belawan Deli	0	0	0	0	----	1
Padang	0	0	0	0	6	----
Surabaya	0	1	0	0	0	0
Siam: Bangkok	0	0	1	1	8	4
China.						
Amoy	0	0	2	----	0	0
Shanghai	0	0	1	1	0	0
U S S R: Vladivostok	0	0	0	0	1	----
Japan	0	0	0	0	1	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week.

ASIA

Arabia.—Aden, Jeddah, Kamaran, Perim.

Iraq.—Basrah.

Persia.—Mohammerah, Bender-Abbas, Bushire.

British India.—Chittagong, Cochin, Vizagapatam, Negapatam.

Ceylon.—Colombo.

Federated Malay States.—Port Swettenham.

Straits Settlements.—Singapore, Penang.

Dutch East Indies.—Cheribon, Samarang, Batavia, Sabang, Makassar, Banjermasin, Palembang, Menado, Pontianak, Balik-Papan.

Sarawak.—Kuching.

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.

Portuguese Timor.—Dilly.

French Indo-China.—Saigon and Cholon, Turane, Haiphong.

China.—Hongkong.

Formosa.—Keelung.

Japan.—Yokohama, Osaka, Nagasaki, Kobe, Niigata, Tsuruga, Hakodate, Shimonoseki.

Korea.—Chemulpo, Fusan.

Manchuria.—Mukden, Changchun, Harbin, Antung.

Kwantung.—Port Arthur, Dairen.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.

New Guinea.—Port Moresby.

New Britain Mandated Territory.—Rabaul.

New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.

New Caledonia.—Noumea.

Fiji.—Suva.

Hawaii.—Honolulu.

Society Islands.—Papeete.

AFRICA

Egypt.—Port Said, Suez, Alexandria.

Anglo-Egyptian Sudan.—Port Sudan, Suakin.

Eritrea.—Massaua.

French Somaliland.—Jibuti.

British Somaliland.—Berbera.

Italian Somaliland.—Mogadiscio.

Kenya.—Mombasa.

Zanzibar.—Zanzibar.

Tanganyika.—Dar-es-Salaam.

Seychelles.—Victoria.

Portuguese East Africa.—Mozambique, Beira, Lourenco, Marques.

Union of South Africa.—East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

British India —Calcutta.
Dutch East Indies —Samarinda, Tarakan
Philippine Islands —Manila, Iloilo, Jolo, Cebu, Zamboanga
Madagascar —Tamatave, Majunga

AZORES

Gastroenteritis—Horta—September, 1926 —During the month of September, 1926, four cases of gastroenteritis with four deaths were reported at Horta, Island of Fayal, Azores.

BRAZIL

Mortality—Leprosy—Malaria—Manaos—July 1–September 30, 1926 —During the three months ended September 30, 1926, 6 deaths from leprosy and 52 from malaria were reported at Manaos, Brazil. The total number of deaths from all causes was 233. Population, estimated, 80,949.

CANADA

Communicable diseases—Week ended October 30, 1926 —The Canadian Ministry of Health reports cases of certain communicable diseases for the week ended October 30, 1926, as follows.

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta[1]	Total
Influenza	13							13
Lethargic encephalitis						2		2
Poliomyelitis				5				5
Smallpox				30	29	6	9	74
Typhoid fever		9	5	23	2	6	9	54

[1] Report for week ended Oct 23, 1926, smallpox, 3, typhoid fever, 2

Communicable diseases—Ontario—October, 1926—Comparative.— During the month of October, 1926, communicable diseases were reported in the Province of Ontario, Canada, as follows:

Disease	1926		1925	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis	5	1	5	5
Chancroid	1			
Chicken pox	544		460	
Diphtheria	429	22	407	14
German measles	7		6	
Gonorrhea	177		141	
Influenza		10		11
Lethargic encephalitis	7	5	2	2
Measles	383		309	
Mumps	25		103	
Pneumonia		128		165
Poliomyelitis	27	4	14	
Scarlet fever	361	1	384	6
Septic sore throat	3		4	
Smallpox	75		19	
Syphilis	173		128	
Tuberculosis	96	54	142	66
Typhoid fever	101	10	137	5
Whooping cough	304	3	247	6

Smallpox.—Smallpox was reported in eight localities, with the greatest number of cases, viz, 48, reported at Timmins.

Hospital standardization—Nova Scotia—Information dated October 27, 1926, shows that 11 hospitals in Nova Scotia have received full or conditional approval from the American College of Surgeons, which in 1918 established hospital standardization The list of hospitals in Nova Scotia which conform to the requirements shows 2 of over 100 beds, and 9 of 50 to 100 beds.

CHILE

Reorganization of Public Health Service—Under date of September 4, 1926, the reorganization of the Public Health Service of Chile was stated to include 13 local boards of health appointed and functioning, and 12 municipal sanitary districts organized and operating. There have been created 83 sanitary divisions, of which 25 were stated to be actually functioning

Teachers' correspondence courses in hygiene.—The department of sanitary education of the bureau of sanitation is stated to have organized a correspondence course in hygiene for all primary school teachers in Chile It was stated that 4,000 teachers had enrolled themselves for the course.

CHINA

Cholera — Plague — Hospitalization — Preventive measures — North Manchuria—Third quarter, 1926.—The following information was received under date of October 18, 1926, with regard to disease prevalence in North Manchuria, China, for the quarter ended September 30, 1926:

Cholera and choleraic diseases.—Cholera appeared at Harbin during the summer of 1926, the first authentic case being in a bean-cake worker reported August 5, followed by three other cases in the same group. Cases appeared in the Special Area, the greatest number reported for any one day seldom exceeding 10. The last case in the Chinese city was reported September 12 and the last in the Special Area about September 19. The number of cases admitted to hospital was: For the municipal hospital, 66 cases, with 36 deaths, Pinchiang (Plague Prevention Service), 168 cases with 29 deaths; railway hospital, 55 cases with 18 deaths. Cholera was reported in practically every large city in North Manchuria, the greatest number of cases being reported at Antung (500), and Changchun (320). Dairen had 10 cases and Newchwang 167 cases The total number of cases in North Manchuria was stated to be not much over 1,500.

The total number of cases reported in Manchuria was stated to have been one-tenth of that reported in the year 1919.

Related diseases.—Dysentery and infantile diarrhea were stated to have been unusually prevalent during the summer of 1926.

Typhoid fever—Typhoid fever prevalence was noted during the period under report

Plague—A few sporadic cases of plague, occurring in Russians, were reported in the transbaikal region The bubonic cases occurred in tarabagan hunters Two cases of pneumonic plague were reported among horse breeders at Olovianaya, an important city situated between Manchouli and Chita.

EGYPT

Plague—Western Desert Province—During the week ended October 21, 1926, four cases of plague were reported in the Western Desert Province 60 kilometers distant from Sidi Barrani

Summary—January 1–October 21, 1926.—During the period January 1 to October 21, 1926, 139 cases of plague were reported in Egypt as compared with 131 cases reported for the corresponding period of the year 1925.

JAMAICA

Smallpox (alastrim)—September 26–October 30, 1926—During the period from September 26 to October 30, 1926, 89 cases of smallpox (reported as alastrim) were notified in the Island of Jamaica, occurring in localities other than Kingston.

Other communicable diseases—During the same period other communicable diseases were reported in the island as follows:

Disease	Cases: Kingston	Cases: Other localities	Disease	Cases: Kingston	Cases: Other localities
Chicken pox	1	9	Ophthalmia		1
Diphtheria		2	Paratyphoid fever		1
Dysentery	27	19	Puerperal fever	1	2
Erysipelas	1	1	Tuberculosis	17	60
Leprosy		1	Typhoid fever	19	111

Population of island, estimated, 858,118, population of Kingston, 62,707, census

JAPAN

Cholera—Taiwan Island.—During the period September 21 to October 10, 1926, 11 cases of cholera were reported in the island of Taiwan, Japan, making a total of 16 cases occurring since September 1, 1926. The first case was stated to have arrived in the Taihoku Province from Foochow, China, through the port of Tansui.

MEXICO

Cerebrospinal meningitis—Gastroenteritis—Progreso—October 10–16, 1926.—During the week ended October 16, 1926, two deaths from cerebrospinal meningitis and two from gastroenteritis were reported

at Progreso, Yucatan, Mexico. Meningitis was stated to be of frequent occurrence as a cause of mortality in children.

Influenza.—During the same period influenza was reported present in epidemic form but not of virulent type.

PERU

Cooperation of the press in sanitary work.—According to information dated August 20, 1926, a meeting of leading editors called on that date at Lima considered the subject of the responsibility of the press in regard to the defense of public health and agreed on a program for broadcasting information in the interest of a sanitary campaign then being carried on. Especial attention was given to the need for cement foundations in house building to prevent the ingress of rats.

Inauguration of anticancer league—Lima—Information has been received under date of September 11, 1926, in regard to the inauguration by the Surgical Society of Peru, of the anticancer league for conducting a campaign against cancer in Peru. It was stated that a permanent committee had been established for the study of cancer conditions, the program of the committee to include the establishment of dispensaries for cancer treatment in various hospitals, establishment of a library of medical information on the subject of cancer, and a bureau of propaganda to distribute data as to the prevention and treatment of the disease. The program was to include the appointment of a visiting service for cancer work, special care of cancer patients in general hospitals, and the creation of a special hospital for the treatment of cancer cases.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended November 26, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China:				
Amoy	Oct 3-9	18		
Changsha	do	1		
Manchuria—				
Antung				August, 1926 Cases, 500
Changchun				August, 1926 Cases, 320
Dairen				August, 1926: Cases, 10
Harbin	Aug. 5-Sept 12	289	83	
Newchwang				August, 1926 Cases, 167
Swatow	Oct 3-9	7		
French Settlements in India	July 25-Aug 28	52	47	
India				Sept 19-25, 1926: Cases, 1,359, deaths, 832.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended November 26, 1926[1]—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
Japan				
Taiwan Island	Sept 21–Oct 10	11		Sept 1–Oct 10, 1926 Cases, 16. Occurring in Taihoku Province First case stated to have been in Chinese from Foochow, arrived by port of Tansui

PLAGUE

Place	Date	Cases	Deaths	Remarks
Egypt				Jan 1–Oct 21, 1926. Cases, 139, corresponding period 1925—cases, 126
Province—				
Western Desert—				
Sidi Barrani	Oct 16–21	4		Bubonic
India				Sept. 19–25, 1926 Cases, 1,535, deaths, 860
Bombay	Sept 26–Oct 9	4	4	
Madras Presidency	Sept 19–25	65	31	
Rangoon	Oct 3–9	1	2	
Java				
Batavia	do	10	10	
Surabaya	Sept 19–25	1		
Madagascar				August 16–31, 1926 Cases, 112, deaths, 106
Province—				
Itasy	Aug 16–31	1	1	Pneumonic
Maevatanana	do	2	2	Bubonic.
Majunga	do	15	15	Do
Tamatave	do	15	10	Do.
Nigeria	July 1–31	121	112	
Senegal	June 1–30	192	136	
Siam				Apr 1–Oct 2, 1926 Cases 15; deaths, 10

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria	Aug 21–Sept 20	143		
Belgium	Sept 1–30	2		
Canada:				
Alberta	Oct 24–30	9		
Calgary	do	5		
Manitoba	do	29		
Winnipeg	Oct 31–Nov 6	1		
Ontario				October, 1926 Cases, 75; corresponding period, 1925—cases, 19.
Saskatchewan	Oct. 24–30	6		
China				
Chungking	Sept 26–Oct 2			Prevalent
Manchuria—				
Penhsihu	Sept 27–Oct 3	1		South Manchuria Railway.
Tieh-ling	do	1		Do
Chosen	July 1–31	82	27	
France	Aug 1–31	7		
French Settlements in India	July 25–Aug 28	31	31	
Germany.				
Coblenz	Oct 24–30	1		
Gold Coast	July 1–31	20	1	
Great Britain.				
England and Wales—				
Newcastle-on-Tyne	Oct 24–30	1		
Sheffield	Oct 17–23	12		
India				Sept 19–25, 1926 Cases, 1,067; deaths, 281
Bombay	Sept 26–Oct 9	6	3	
Madras	Oct. 10–16	5	1	
Jamaica	Sept 26–Oct. 30	89		
Japan	July 17–Aug 28	30		
Java				
Batavia	Oct 3–9	6		Province
Surabaya	Sept 12–25	46	1	
Mexico	June 1–30		246	
San Luis Potosi	Oct 31–Nov. 6		2	
Torreon	Oct 17–23		1	
Poland				Aug 30–Sept. 11, 1926 Cases, 414.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended November 26, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Siam				Sept 26–Oct 2, 1926 Cases, 7, deaths, 6 Apr 1–Oct 2, 1926 Cases, 590, deaths, 236
Bangkok	Sept. 26–Oct 2	3	5	District
Spain				Jan 1–June 30, 1926 Deaths, 99
Tunisia				Aug 21–Sept 20, 1926 Cases, 23
Union of South Africa				
Transvaal—				
Johannesburg	Sept 19–25	1		Native
Pretoria	do	1		Stated to have come from Johannesburg

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria	Aug 21–Sept 20	16		
Chosen	July 1–31	37	6	
France	Aug 1–31	5		
Ireland (Irish Free State)				
Cobh (Queenstown)	Aug 17–23	1		
Latvia	Aug 1–31	2		
Lithuania	do	6		
Mexico	June 1–30		34	
Mexico City	Oct 17–30	14		Including municipalities in Federal District
Morocco	Aug 1–31	10		
Poland	Aug 15–Sept 18	83	7	
Rumania	June, 1926	188	16	
Do	July, 1926	65	9	
Spain	Jan 1–June 30		13	
Tunisia	Aug. 1–Sept. 20	43		

Reports Received from June 26 to November 19, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18–May 29, 1926 Cases, 31, deaths, 29
China.				
Amoy	Aug 8–Oct 2	235		Stated to be present in epidemic form.
Canton	June 1–30	38	14	
Do	July 15–31	54	28	
Foochow	Aug 15–Oct 2		1	In foreign population
Kulangsu	Sept 12–18		2	
Manchuria—				
Dairen	Aug 23–29	1	1	
Nanking	July 25–Oct 2			Present
Shanghai	Reported July 20	35	8	
Do	July 25–Oct 2	38	409	Cases, foreign, deaths, native and foreign
Swatow	July 11–Oct 2	36	63	
Tsingtao	July 11–Aug 30	4	4	Japanese settlements, 10 deaths, Chinese, 30 to 40 deaths daily, estimated
Chosen.				
North Heian Province	Sept 3–16	70	30	Deaths estimated.
Shingishu	Sept. 13	19		Including places in vicinity.
French Settlements in India	Mar 7–June 26	31	30	
Do	June 27–July 24	42	36	
India				Apr 25–June 26, 1926 Cases, 18,526, deaths, 11,531. June 27–Sept 18, 1926 Cases, 25,044, deaths, 15,977.
Bombay	May 30–June 5	1	1	
Do	July 18–Aug 28	3	3	
Calcutta	Apr 4–May 29	478	418	
Do	June 13–26	73	69	
Do	June 27–Sept 25	304	272	
Madras	May 16–June 5	2	1	
Do	Aug 1–Sept. 25	7	6	
Rangoon	May 9–June 26	67	44	
Do	June 27–Sept 4	31	29	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 19, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug 14	31	17	
Japan				To Sept 10, 1926 Cases, 35
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Taihoku	Sept 1-10	2		
Wakayama	To Sept 10	2		
Philippine Islands				
Manila	May 18-24	2	2	
Do	June 27-Oct 2	14	3	
Provinces—				
Albay	Apr 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb 21-Mar 6	3	3	
Pampanga	July 25-31	1	1	
Rizal	July 18-24	1		
Romblon	Dec. 14-31	42	43	
Do	Jan 2-Mar 27	41	35	
Siam				Apr 1-Sept 25, 1926; Cases, 7,643; deaths, 5,023
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-Sept. 25	94	68	
Straits Settlements				
Singapore	July 4-17	2	1	
On vessel				
Steamship Macedonia	Aug. 5	7		At Yokohama, Japan Vessel sailed from Singapore, July 18, 1926

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported
Do	July 1-20	1		
Do	Sept 23	1		
Bona	Aug 14	1		
Oran	Sept 21-Oct 10	9	4	
Philippeville	Sept 7	1		
Azores				
Fayal Island—				
Horta	Aug 2-29	2	2	
St Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	
Brazil				
Paranagua	Oct 8			Present
British East Africa				
Kisumu	May 16-22	1	1	
Do	Aug 17-Sept 11	3	2	
Uganda	Mar 1-June 30	732	574	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	
China				
Amoy	Apr. 18-June 26	40	30	
Do	June 27-Aug. 7	28		
Foochow	June 6-July 31			Several cases Not epidemic.
Nanking	May 9-Sept 18			Prevalent
Swatow	July 25-31	14		
Ecuador				January-June, 1926. Cases, 385; deaths, 154
Chimborazo	January-June	9	2	Rats taken, 766

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 19, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Ecuador—Continued				
Guayaquil	May 16-June 30	6		Rats taken, 30,914; found infected, 31
Do	July 1-Sept 30	16	3	Rats taken 62,544; found infected, 89
Leon	January-June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1,512
Egypt				Jan 1-Sept 9, 1926 Cases, 128
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
Sidi Barrani	Sept 30-Oct 12	19	3	In western desert.
France				
Marseille	July 8	1	1	Reported July 24
Paris	Oct 18	1		
St Denis	Reported Aug 2	1		Vicinity of Paris.
St Ouen	Aug 14	2		Suburb of Paris
Great Britain				
Liverpool	Aug 29-Sept 4	2	1	
Greece				
Athens	Apr 1-May 31	16	4	Including Piræus.
Do	Aug 1-Sept 30	20	5	Do
Patras	May 27-June 12	4	1	
Do	July 25-Oct 2	8	4	
Zante	May 17	1		
Hawaii Territory				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Honokaa	Oct 6	1	1	
Paauhau	July 18-24			Plague-infected rat trapped
India				Apr 25-June 16, 1926 Cases, 53,001, deaths, 41,576 June 27-Sept 18, 1926 Cases, 5,739, deaths, 3,275
Bombay	May 2-June 26	16	15	
Do	July 18-Sept 18	9	8	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	162	93	
Do	July 4-Sept 18	655	318	
Rangoon	May 9-June 26	20	15	
Do	June 27-Oct 2	83	72	
Indo-China				
Saigon	May 23-June 26	8	3	
Do	July 18-Aug 7	2	1	
Iraq				
Baghdad	Apr 18-June 12	161	108	
Do	July 18-Sept 11	4	4	
Japan				
Yokohama	July 2-Aug 10	9	80	
Java				
Batavia	Apr 24-June 19	65	65	
Do	June 20-Oct 2	70	68	
Cheribon	Apr 11-24	3	3	
Do	Sept 12-18	1	1	
East Java and Madura	June 13-19	1	1	
Do	July 25-31	1	1	
Surabaya	Aug 22-28	17	2	
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Majunga Province	do	10	6	
Mananjary Province	do	1	1	
Moramanga Province	Apr 1-15	2	2	Do
Tananarive Province				Apr. 1-June 30, 1926 Cases, 130; deaths, 120 July 1-Aug 31, 1926 Cases, 126, deaths, 119
Towns—				
Majunga	Aug 1-15	14	10	
Tamatave (Port)	May 16-31	1	1	
Do	July 1-Aug 15	6	5	
Tananarive	Apr 1-June 30	7	7	
Do	July-Aug 31	24	24	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 19, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Mauritius				
Port Louis	July 31	1	1	
Nigeria				Feb 1-June 30, 1926 Cases, 191; deaths, 103
Peru				May-June, 1926 Cases, 57; deaths, 16 July 1-Sept 30, 1926 Cases, 89; deaths, 52
Departments—				
Ancash	May 1-31			Present.
Do	July 1-Sept 30	2		
Cajamarca	May 1-June 30	10	4	
Do	Aug 1-Sept 30	1		
Ica	May 1-31	1		
Do	July 1-31	1		
Junin	Sept 1-30	21	20	
Lambayeque	do	1		
Libertad	May 1-31	4		
Do	Sept 1-30	3	1	
Lima	May 1-June 30	29	12	
Do	July 1-Sept 30	60	31	
Piura	June 1-30	13		
Russia				Jan 1-Mar 31, 1926 Cases, 37
Senegal				Nov 1-30, 1925. Cases, 3, deaths, 2 Mar 1-May 31, 1926 Cases, 150, deaths, 77
Siam				Apr 1-Sept 25, 1926 Cases, 15, deaths, 10
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Do	July 4-17	1	1	
Syria				
Beirut	July 1-Aug 10	2		
Do	Oct 15			Present.
Tunisia	May 11-June 30	174		
Do	July 1-Aug 20	13		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan.
Turkey				
Constantinople	Aug. 1-Sept 25	7	4	
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug 21	3	3	
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District	Aug 15-21	1		
Protestpan	May 9-22	3	3	
On vessel				
Steamship Zaria	September, 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa, 29 plague-infected rats found on board.

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				July 21-Aug 20, 1926 Cases, 87
Algiers	May 21-June 20	14		
Do	July 1-Aug 31	3		
Arabia				
Aden	Oct 3-9	1		Imported.
Belgium				
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-Aug 31	16	8	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Oct 2	71	39	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-Sept 25	29	19	
Pernambuco	July 11-Sept 25	186	22	
Porto Alegre	Aug 10-31	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 19, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Brazil—Continued				
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 25	2,531	1,338	
Do	Oct 3-16	196	113	Jan 1-Oct 16, 1926 Cases, 3,601, deaths, 1,896
Sao Paulo	June 27-Aug 22		5	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Do	Sept 11-17	1		
Canada				
Alberta				May 30-June 12, 1926 Cases, 3 June 27-Oct 16, 1926 Cases, 53
Calgary	Sept 5-Oct 16	21		
British Columbia—				
Vancouver	Aug 16-Sept 12	3		
Manitoba				May 30-June 26, 1926 Cases, 15 June 27-Sept 25, 1926 Cases, 19
Winnipeg	June 6-12	5		
Do	July 4-Sept 4	12		
New Brunswick—				
Northumberland County	Oct 11-23	1		
Ontario				May 30-June 26, 1926 Cases, 36 June 27-Oct 23 Cases, 87
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2		
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Peterboro	Sept 1-30	10		
Toronto	July 18-Oct 23	12		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16 June 27-Oct 23, Cases, 89
Regina	July 4-Sept 25	3		
Ceylon				Mar 14-May 29, 1926 Cases, 44, deaths, 3 Sept 12-18, 1926 Cases, 2
Colombo	Sept 19-Oct 2	6		
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Changsha	Aug 8-14	1		
Chungking	May 2-Sept 18			Present
Foochow	May 2-Oct 2			Do
Fushun	Sept. 12-18	1		
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations.
An-shan	May 16-June 12	5		South Manchurian Railway
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-Sept 11	2		Do
Dairen	Apr 26-June 20	69	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do.
Harbin	May 14-June 30	21		Do.
Do	July 1-28	12		
Kai-yuan	May 16-June 30	10		Do.
Kungchuling	June 13-19	1		Do
Liaoyang	May 16-June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do
Do	Aug. 8-22	2		Do
Ssupinghai	May 16-June 30	2		Do.
Do	Aug 1-7	1		Do
Teshihchiao	May 16-June 30	2		Do.
Wa-fang-tien	do	3		Do
Do	Aug. 1-7	1		Do.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 19, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Nanking	May 8-Sept 18			Present
Shanghai	May 2-June 26	10	25	Cases, foreign Deaths, population of international concession, foreign and native
Do	June 27-July 21	3	3	
Swatow	May 9-Sept 25			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-June 30, 1926 Cases, 667, deaths 116
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Oct 7	13	6	
Cairo	Jan 29-May 13	39	8	
Estonia				May 1-June 30, 1926 Cases, 3
France				Mar 1-June 30, 1926 Cases, 141; July 1-31 Cases, 17
Paris	Sept 1-Oct 10	43	9	
St. Etienne	Apr 18-June 15	7	3	
Do	Sept 16-30	2	1	
French Settlements in India	Mar 7-June 26	282	282	
Do	June 27-July 31	37	37	
Gold Coast	Mar 1-June 30	9		
Great Britain				
England and Wales				May 23-June 26, 1926 Cases, 933; June 27-Oct 16, 1926 Cases, 1,638
Birmingham	Sept 26-Oct 2	1		
Bradford	May 23-29	1		
Do	Aug 29-Sept 4	1		
Hull	Oct 17-23	1		
London	Sept 26-Oct 16	3		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-Oct 9	4		St Gateshead, several cases reported
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Oct 2	9		
South Shields	Oct 3-9	1		
Greece				
Athens	July 1-31	71	6	Including Piræus
Saloniki	June 1-14		3	
Guatemala.				
Guatemala City	June 1-30		2	
India				Apr. 25-June 26, 1926. Cases, 54,851, deaths, 14,771 June 27-Sept 18, 1926 Cases, 25,994; deaths, 7,950.
Bombay	May 2-June 26	220	134	
Do	June 27-Sept 18	112	61	
Calcutta	Apr 4-May 20	171	152	
Do	June 13-26	24	18	
Do	June 27-Oct 2	45	42	
Karachi	May 16-June 26	44	18	
Do	June 27-Oct 2	14	7	
Madras	May 16-June 26	7	4	
Do	June 27-Oct 9	71	19	
Rangoon	May 9-June 26	10	5	
Do	July 4-Sept 11	21	4	
Indo-China				
Saigon	May 9-June 26	2		
Iraq				
Baghdad	do	8	3	
Do	July 4-Sept. 11	3	1	
Basra	Apr 18-June 22	34	25	
Do	Aug 15-21	1		
Italy				Mar 28-June 26, 1926 Cases, 34. June 27-July 31, 1926 Cases, 11.
Catania	Aug 9-15	2		
Rome	June 14-20	4		Entire consular district, including island of Sardinia
Jamaica				Apr 25-June 26, 1926, Cases, 201. (Reported as alastrim.)
Do				June 27-Sept 25, 1926 Cases, 238. (Reported as alastrim)
Japan				Apr 11-June 26, 1926: Cases, 658. June 27-July 17, 1926: Cases, 40
Kobe	May 30-June 5	1		
Nagoya	May 16-June 22		1	
Do	July 4-10	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 19, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Japan—Continued				
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug. 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-June 25	2		Province
Do	July 24-Sept 25	10		Do
East Java and Madura	Apr 11-July 3	100	6	
Do	July 4-Aug 7	43	1	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Do	July 18-Sept 11	97	7	
Latvia				Apr 1-June 30, 1926: Cases, 5
Mexico				Feb 1-May 31, 1926 Deaths, 1,279
Aguascalientes	June 13-26		3	
Guadalajara	June 8-14		2	
Do	June 29-Sept 27		8	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
Do	July 25-Sept 25	6		Do
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-Oct 23		19	
Tampico	June 1-10		2	
Torreon	May 1-June 30		17	
Do	July 1-Sept 30		13	
Netherlands.				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-June 30, 1926 Cases, 521; deaths, 49
Persia				
Teheran	Apr 21-July 23		10	
Peru				
Arequipa	June 1-30		1	
Poland				Mar. 28-May 1, 1926 Cases, 12, deaths, 1 June 27-July 24, 1926 Cases, 2, deaths, 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Oct 23	26	6	
Oporto	May 23-June 5	4		
Do	July 11-24	2		
Russia				Jan 1-Apr 30, 1926: Cases, 2,529
Siam				Apr 1-Sept 25, 1926: Cases, 583, deaths, 230
Bangkok	May 2-June 12	23	20	
Do	July 4-Sept 25	74	55	
Spain:				
Valencia	Aug 22-Oct 23	3		
Straits Settlements.				
Singapore	Apr 25-May 1	1		
Do	July 11-17	1		
Sumatra				
Medan	Aug 22-28			One case varioloid
Switzerland				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tripolitania	Apr 1-June 30	12		
Tunisia				Apr 1-June 30, 1926: Cases, 17 July 1-Aug 20, 1926: cases, 15
Tunis	Aug. 11-30	2		
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks
Do	Aug 15-21			Do
Idutya district	May 23-29			Do
Natal	May 30-June 5			Do
Orange Free State	June 20-Aug 28			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Do	Aug 29-Sept. 4	1		Native
Johannesburg	May 9-June 12	5		
Do	July 11-Sept 25	4		
Yugoslavia				Apr 15-30, 1926: Cases, 2, deaths, 1.
Zagreb	Aug 9-15	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 19, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
On vessels				
S. S. Karapara				At Zanzibar, June 7, 1926. One case of smallpox landed. At Durban, Union of South Africa, June 16, 1926. One suspect case landed.
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada. Patient from Glasgow removed at quarantine on outward voyage.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				July 21-Aug. 20, 1926: Cases, 18; deaths, 1.
Algiers	May 21-June 30	7	1	
Do	July 21-Aug. 31	3		
Argentina				
Rosario	Feb. 1-28	2		
Bolivia				
La Paz	June 1-30		1	
Do	Aug. 1-31	9	1	
Bulgaria				Mar. 1-June 30, 1926: Cases, 87; deaths, 14.
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Valparaiso	Apr. 29-May 5		1	
Do	Aug. 14-Sept. 18	7		
China				
Antung	June 14-27	7	1	
Do	June 28-Oct. 10	37	1	
Canton	May 1-31	1		
Chungking	Aug. 29-Sept. 4			Present.
Ichang			1	Reported May 1, 1926. Occurring among troops.
Wanshien				Present among troops, May 1, 1926. Locality in Chungking consular district.
Chosen				Feb. 1-June 30, 1926: Cases, 1,005; deaths, 112.
Chemulpo	May 1-June 30	38	2	
Do	July 1-31	7	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Do	July 1-Aug. 31	8		
Czechoslovakia				Jan. 1-June 30, 1926: Cases, 156; deaths, 6.
Egypt				
Alexandria	July 16-Aug. 19	3		
Do	Oct. 1-7	1	1	
Cairo	Jan. 29-May 13	89	27	
Do	July 23-Aug. 5	1		
Port Said	June 4-24	4	1	
Do	July 9-Oct. 7	5	1	
Great Britain				
Scotland—				
Glasgow	July 30-Aug. 21	9	1	
Greece				
Athens	Sept. 1-30		17	Including Piraeus.
Hungary	May 1-June 30	3		
Ireland (Irish Free State).				
Cobh (Queenstown)	May 30-June 5	1		
Do	June 27-July 3	1	1	
Cork	June 5	1		
Cork county	Oct. 17-23	1		
Kerr County—				
Dingle	June 27-July 3	1		
Italy				Mar. 28-May 8, 1926: Cases, 3.
Palermo	Sept. 12-18	1		
Japan				Mar. 28-May 29, 1926: Cases, 37.
Latvia				May 1-June 30, 1926: Cases, 19.
Lithuania				Mar. 1-June 30, 1926: Cases, 199; deaths, 22. July 1-31, 1926: Cases, 17.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 19, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Mexico				Feb 1-May 31, 1926 Deaths, 135
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal District
Do	June 13-19	9		Do
Do	July 25-31	3		Do
Do	Aug 15-Oct 23	59		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-June 30, 1926 Cases, 426 July 1-31, 1926 Cases, 10
Norway				
Stavanger	Sept 6-12	1		
Palestine				Mar 1-June 30 1926 Cases, 14, deaths 1 Aug 10-Oct 11, 1926 Cases, 12
Gaza	July 6-12	1		
Haifa	July 13-Aug 30	5		
Halalal	Aug 17-23	1		
Jaffa district	June 15-28	5		
Do	Sept 28-Oct 4	1		
Jerusalem	Sept 14-27	2		
Majdal district	July 13-Aug 2	2		
Nazareth district	do	3		
Petah Tokvah	Oct 5-11	3		
Tiberias	Aug 3-9	1		
Yavneil	Aug 17-23	1		
Persia				
Teheran	May 23-June 22		1	
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85 June 27-Aug 14, 1926 Cases 211, deaths, 15
Rumania				Mar 1-May 31, 1926 Cases, 711, deaths, 69
Russia				Jan 1-Apr 30, 1926 Cases, 18,647
Tunisia				Apr 1-June 30, 1926 Cases, 110 July 1-Aug 20, 1926 Cases, 58
Tunis	June 11-30	3		
Turkey				
Constantinople	June 16-22	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths, 19
Do				July 1-31, 1926 Cases, 90, deaths, 17
Cape Province				Apr 1-June 30, 1926 Cases, 202, deaths, 24, native. July 1-31, 1926. Cases, 58; deaths, 15.
Glengray district	June 27-July 3			Outbreaks
Grahamstown	do	1		
Natal				Apr 1-June 30 1926 Cases, 28 July 1-31, 1926 Cases, 23; deaths, 2
Durban	July 25-Sept 18	11	1	
Orange Free State				Apr 1-June 30, 1926 Cases, 21, deaths, 4. July 1-31, 1926 Cases, 7
Transvaal				Apr 1-June 30, 1926 Cases, 10, deaths, 5 July 1-31, 1926 Cases, 2 Aug 15-21, 1926
Johannesburg	Aug 29-Sept. 4	1		Outbreaks
Walkkerstroom district	June 20-26			Do
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 48, deaths, 7 July 1-Aug 31, 1926 Cases, 3, deaths, 1
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr. 1-June 30	8	4	
Nigeria	June 1-30	1	1	

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TREASURY DEPARTMENT

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Health Studies of Negro Children

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HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C C PIERCE, *Chief of Division*

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PUBLIC HEALTH REPORTS

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HEALTH STUDIES OF NEGRO CHILDREN

I. INTELLIGENCE STUDIES OF NEGRO CHILDREN IN ATLANTA, GA.

I. Introduction

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During the scholastic year 1925–26 the United States Public Health Service, in cooperation with the Georgia State Board of Health and the Atlanta Board of Education, conducted a survey of the mental and physical status of the children in the negro public schools of Atlanta The psychological examinations, with which this paper is concerned, were made in five of the elementary negro schools, and include tests—group, individual, or both—of a total of 3,028 children.

In four of the schools, group tests were given to all the grades except the first, that is, to grades 2 to 6, inclusive. As group tests are more unreliable with very young children whose comprehension and cooperation it is somewhat difficult to secure in such circumstances, it was thought best to devote the time to the subjects that promised the most reliable results Consequently the data on group tests contain only 79 cases of children below grade 2, and these are from two sections of a high first grade in the same school. In the fifth school, as time did not permit the testing of all classes, the group examination was given only to the fifth and sixth grades, in order to increase the number of cases at the higher age levels.

The Otis Group Intelligence Scale [1] was used for all the group testing—the "Primary" form for the first four grades and the "Advance" for grades 5 and 6. The selection of cases for individual examinations was determined chiefly by the Otis test. As many as possible of the children who made low or doubtful scores in this scale were given individual tests; a few other special cases were referred by principals and teachers, and a group of unselected first-graders was studied, these last consisting chiefly of the children who had received physical examinations in connection with the same general survey. The individual examinations consisted of the Standford revision of the Binet-Simon tests [2] supplemented, at the discretion of the examiner, by Kohs Block Design Test,[3] the Lin-

[1] Otis, Arthur A. Otis Group Intelligence Scale—Manual of Directions for Advanced and Primary Examinations. 1921 revision

[2] Terman, Lewis M · The Measurement of Intelligence Boston, 1916.

[3] Kohs, S. C Intelligence Measurement New York, 1923

coln Hollow Square,[4] and the Healy Construction A.[5] All of the tests were made by the writer

II. The Group Tests

In order to consider the data in their most objective form, the results are first studied in terms of crude score, that is, the total number of points made on the test. This necessitates the separation of the primary test (first four grades) from the advanced examination (here the fifth and sixth grades) Age designations in this paper always refer to the last birthday. Thus, in the 7-year group ~~are~~ included all children who have passed their seventh but have not reached their eighth birthday, and whose median age would therefore approximate 7 years 6 months

In the absence of comparable data on white children from this locality, comparison is probably best based on the figures furnished by Otis. His subjects come, he says, "from some 200 cities throughout the country "[6] When the mean scores obtained on the primary examinations of the group studied by age groups 7 to 12, inclusive, are compared with the Otis white norms[7] for the respective mid-year points (see Table 1), yearly increments in score are shown in both cases. They are appreciably larger in the case of the American white norms.

TABLE 1.—*Mean scores of Atlanta negro children on Otis primary examination compared with Otis's norms for American whites*

	Age					
	7	8	9	10	11	12
Negro	31	36	41	43	47	50
Norm	28	41	54	66	74	79
Difference[1]	3	−5	−13	−23	−27	−29

[1] Minus sign indicates that the score of negro is lower.

The increments generally decrease with age, and this is relatively more marked in the case of the group here studied. Although the mean score of the 7-year-old negroes is slightly higher than the Otis norm, at every succeeding age level the score falls progressively below the standard.

Table 2 makes a similar comparison in the case of the advanced examination.

[4] Dearborn, Walter F., Shaw, Edwin A , and Lincoln, Edward A A Series of Form Board and Performance Tests of Intelligence. Harvard Monographs in Education, Series 1, No. 4, September 1923, pp 32–33, 56–59

[5] Pintner, Rudolf, and Paterson, Donald G : A Scale of Performance Tests New York, 1917, pp 44–53, 122–126.

[6] Op. cit. p. 54.

[7] Ibid. p. 71.

TABLE 2.—*Mean scores of Atlanta negro children on Otis advanced examination compared with American white norms*

	Age				
	10	11	12	13	14
Negro	52	54	59	57	55
Norm	61	74	85	95	105
Difference	−9	−20	−26	−38	−50

Attention should be called to the fact that the relatively few 10-year-old negro children in the fifth and sixth grades—83 cases in comparison with 328 cases in the lower four grades—are obviously superior ones and, hence, do not give a fair measure of racial performance on this particular scale. At the other extreme, the 13 and 14 year olds who have not progressed beyond the sixth grade and whose scores on this test fall below that of the 12-year-olds, are just as obviously not fair representatives of negro achievement at those ages At ages below 13, where the selection is fair, the racial means of the group studied fall consistently below the white norms, the discrepancy between the two increasing with age.

In fairness to the negro children it should be noted that, while our figures for the negroes are strictly empirical, the Otis norms are partly theoretical, the curves, naturally, are somewhat straightened and points are moved in accordance with *a priori* considerations. If the actual means are computed from the Otis data [8] the figures given in Table 3 are obtained for comparison.

When these figures are compared with those in the two preceding tables, the most striking point is that Otis, in preparing his norms, has decidedly readjusted his figures for ages 10, 11, and 12 in the primary examination The norm he sets is markedly higher than his obtained mean at each of these age levels His obvious reason for so doing is because his subjects, coming as they do from the first five grades only, do not include any of the brighter children of these ages and so give a mean that is too low. The same point can, of course, be made with respect to the negro subjects, who, in the case of the primary examinations, are not drawn from grades higher than the fourth, and in the case of the advanced examination are confined to grades 5 and 6. The amount of retardation that is characteristic or normal for the races will be referred to later.

[8] Ibid, pp. 76-80.

TABLE 3.—*Comparison of mean scores of Atlanta negroes and of Otis's subjects*

	Age								
	Primary examinations						Advanced examinations		
	7	8	9	10	11	12	11	12	13
Negro	31	36	41	43	47	50	54	59	57
White	31	42	52	59	60	62	75	85	95
Difference	0	−6	−11	−16	−13	−12	−21	−26	−38

TABLE 4.—*Otis test scores, variabilities, difference from American white*

PRIMARY EXAMINATIONS, GRADES 1 to 4

Age	Atlanta negroes					American white (200 cities)					Difference from American white	
	Number of cases	Mean score	Probable error	Standard deviation of distribution	Probable error	Number of cases	Mean score	Probable error	Standard deviation of distribution	Probable error	Difference	Probable error of difference
7	215	31 36	±0 47	10 13	±0 33	501	31 01	±0 45	15 07	±0 32	0.35	±0.65
8	335	35 56	± 41	11 05	± 29	537	42 45	± 44	15 26	± 32	−6.89	± 60
9	366	41 26	± 42	11 93	± 30	498	50.35	± 43	14 31	± 31	−9 09	± 60
10	328	43 48	± 47	12.72	± 34	306	51 60	± 54	13 88	± 38	−8 12	± 71
11	215	46 92	± 57	12 46	± 41	127	50 02	±.59	14 81	± 63	−3 10	±1 06
12	211	49 80	± 57	12 31	± 40	70	48 86	±1 17	14 89	± 83	0 94	±1.30

ADVANCED EXAMINATIONS, GRADES 5 AND 6

10	83	52.23	±1 83	24 66	±1 29	2,435	76.11	±0 35	25.70	±0 25	−23 88	±1 86
11	180	54 22	±1 16	23 03	± 82	4,186	79 22	± 29	27 58	± 20	−25 00	±1 19
12	246	59 02	±1.06	24.54	± 75	3,565	77.02	± 30	26 64	±.21	−18.00	±1 10
13	222	57 43	±1 02	22 49	± 72	1,918	71.18	± 35	22.57	±.25	−13 75	±1 08
14	150	55 47	±1 47	26.62	±1 04	842	66.48	± 54	23 42	±.38	−11 01	±1 56

For the sake of ultimate fairness, a comparison may be made which probably favors the negro group. That is, for comparison only, those cases of Otis's may be taken which were in the same grades as those to which we gave the respective tests. Table 4, which gives the means and measures of variability for the subjects of this study, also gives the same data for whites who, in the case of the primary examination, are confined to the first four grades and, in the instance of the advanced examination, to the fifth and sixth grades. We are most concerned with the differences and their reliabilities shown in the last three columns. Whereas, of the 1,670 negro children whose scores on the primary examination we are considering, only 79 were in the first grade, there are 662 white first graders in the 2,039 cases we are now using for comparison. The negro means, then, especially at the lower ages, eliminating as they

do the duller children who are in the first grade, are most probably higher than they should be. This comparison gives a slight lead (0 35) at age 7 to the group under study, which, when taken into consideration with its large probable error (±0.65), becomes entirely negligible. At all succeeding ages through 11, the Otis group are substantially ahead, regardless of the question of selection, and at age 12 the difference in favor of the negro (0.94) is smaller than its probable error (±1.30) The lead of the white children increases through year 9, beyond which age there is evidence that the problem of retardation is affecting their scores much more seriously than it is those of the negroes. The number of cases of white children begins to fall off markedly at year 10, indicating that the majority of children of these ages are further advanced in school.

The data [9] from which Otis standardized his primary examination has 240 cases of 10-year olds in the fifth grade, in comparison with his 306 cases of lower grading that are now being considered. At 11 years, at which age there are 127 of his cases in the first four grades, there are 135 in the fifth grade, and there are the same number of 12-year olds in the fifth grade in comparison with the 70 more retarded cases On the other hand, reference to data here presented for negroes (Table 4, column 2) shows that there are 328 10-year olds in the first four grades to 83 in the fifth and sixth, 215 11-year old "primaries" to 180 "advanced," and, for 12-year olds, 211 "primaries" to 246 "advanced." If these two lots of data may be taken as typical, school retardation is more prevalent among the Negroes; the average white child of a given age is more advanced in school than the colored child of the same age; and the retarded colored child is a more normal racial representative than is the retarded white.

Otis's age-grade distribution for the advanced examination [10] leads to the same conclusion. The number of cases below, coincident with, and above the fifth and sixth grade selection in this study, are as follows:

Age	Grade 4	Grades 5 and 6	Grades 7, 8, 9, 10, 11, and 12	Age	Grade 4	Grades 5 and 6	Grades 7, 8, 9, 10, 11, and 12
10	1,972	2,435	38	13	330	1,918	4,229
11	1,077	4,186	616	14	120	842	4,345
12	575	3,565	2,508		•		

The conclusion seems fair that, on the primary examination, white children 10 years old and older who have not progressed beyond the fourth grade are too inferior to be used as racial representatives, and on the advanced examination the fifth-sixth grade selection does not give fair white averages beyond year 11. With the negro group

[9] Ibid, p. 80. [10] Ibid, pp 76-77.

here studied, the age-grade distribution seems to imply that for 11-year olds the primary group is probably the more typical, but that for 12-year olds the advanced group is certainly the more "normal." The results indicate, also, that beyond the latter age the negro subjects still in the elementary schools are inferior members of the race and can not with fairness be used as a basis for comparison. On the advanced test, at 10 and 11 years, where retardation seems to affect neither race—though the negroes at these ages are probably the more accelerated, relatively—the superiority of the white child is attested by differences (23 88 $\pm$1 86, 25.00 $\pm$1 19) which, when referred to their probable errors, are seen to be very large and reliable; the difference at 11 years is somewhat larger and more reliable than that at 10

Before leaving Table 4 it might be noted that, in all cases, especially before retardation plays a prominent part, the means, when taken into consideration with their probable errors, are seen to be quite distinct and reliable, and that the group variabilities, as measured by the standard deviations of the distribution, are generally greater in the cases of the white children.

Figure 1 pictures the various relationships which have been discussed. It shows that regardless of yearly increments (through age 12) the negro falls progressively below American white norms and below their averages, unless the latter are unduly weighted with retarded cases. Actual deterioration in performance in the case of 13 and 14 year old negroes is not assumed on the basis of present evidence, and those ages are not excluded from the generalizations In like manner, when the selected American white cases give means that fall below those of preceding years (see dotted line on graph), whereas other data prove that in reality the yearly improvement curve is still advancing (see broken line), the selection that deviates from the trend shown by the more inclusive data must be discounted Figure 2 pictures the same facts in terms of relative or proportional change rather than of concrete units.

Since, in considering crude or total scores on the Otis test, it is essential to keep distinct the primary and advanced examinations, the number of cases at each age level can be increased—and so the statistical adequacy—if total scores are not used, but "percentile ranks," which are said by Otis [11] to be comparable in the two examinations. These percentile ranks, of course, presuppose a norm. The child whose score coincides with the norm for his age would have a percentile rank of 50, meaning that in a normal distribution he would excel 50 per cent of the cases and be excelled by 50 per cent. A percentile rank of 10 means that a child excels 10 per cent of children of his age and is excelled by 90 per cent.

[11] Ibid, pp. 52-53.

The appendix gives the complete age and grade distribution, by percentile ranks, of the children of this study. The same data are condensed in Table 5, which emphasizes the clinical groupings, giving the number and the per cent of cases of each age which fall within each of the major categories. It will be seen that in the "feeble-minded" and "borderline" groups the percentage of cases generally increases with age, whereas in the "normal," "superior,"

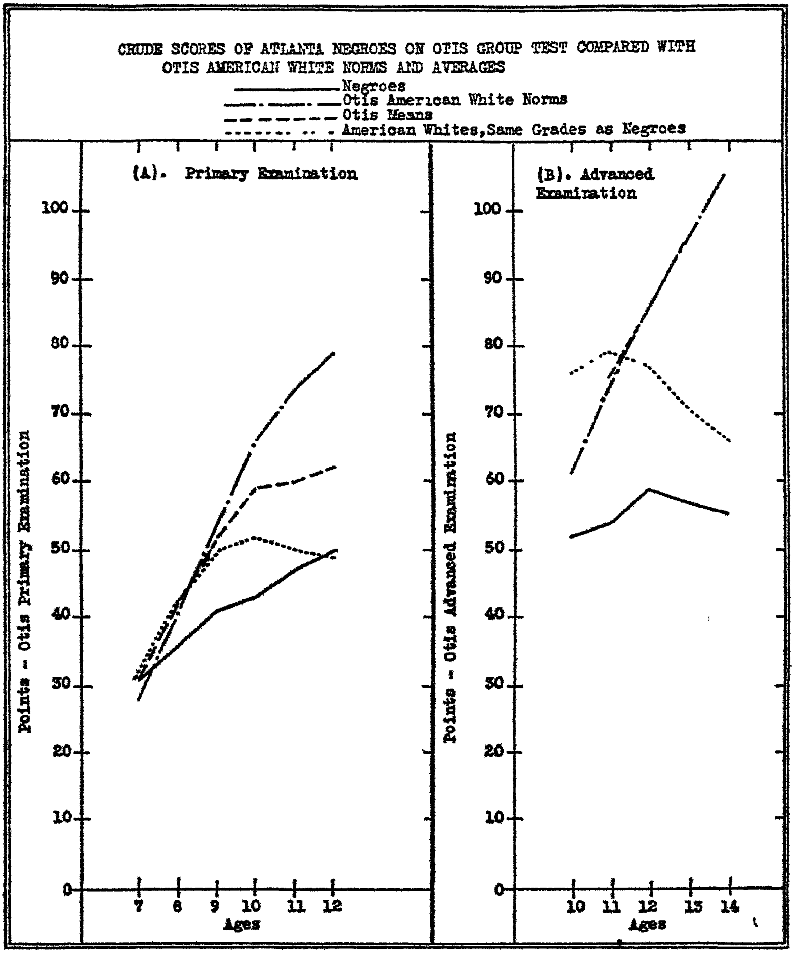

FIG 1

and "very superior" groups it decreases. The central tendencies of the age levels are seen to move constantly from the superior to the inferior extremes with increasing years.

Table 6 gives the means and variabilities of percentile ranks for the several ages. The mean is lower at each succeeding age. The seven-year mean denotes a good average performance (by American white standards); the eight and nine year scores, though increasingly

lower, come within the range of "normality"; by 10 years the mean in this group of negro children has fallen below the lower limit of "normality" into the region classified as "dull", and therein are found all the means of the higher ages.

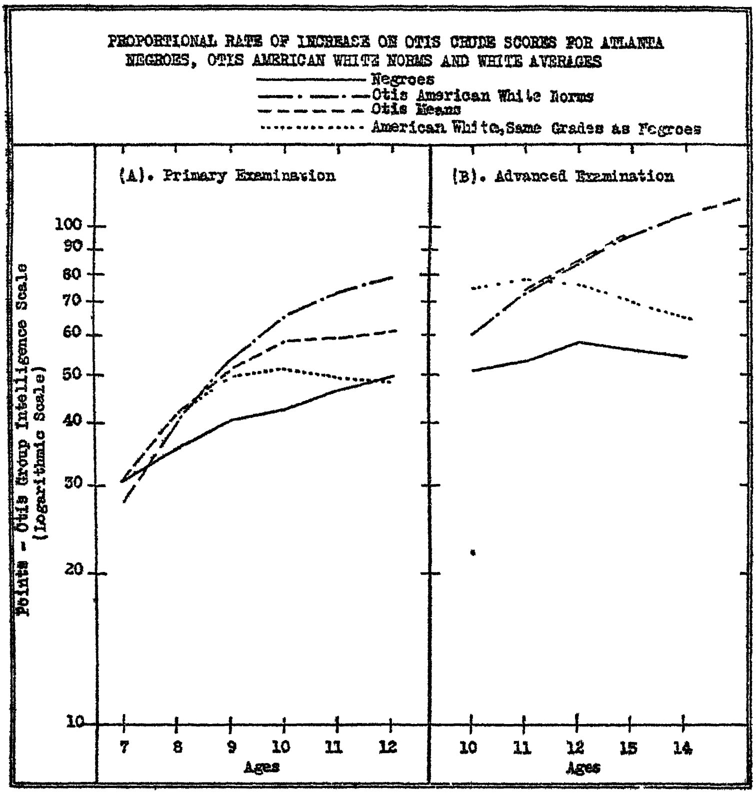

FIG 2

TABLE 5—*Percentile rank distribution on Otis tests, by age and clinical groups—Atlanta negro children*

Age	0 00-0 49, feeble minded		0 50-4 99, border line		5-19, dull		20-79, normal		80-94, superior		95-99 9, very superior		Total
	Cases	Per cent	Cases	Per cent	Cases	Per cent	Cases	Per cent	Cases	Per cent	Cases	Per cent	
6							44	74 6	13	22.0	2	3 4	59
7					22	10 2	159	74 0	30	14 0	4	1.9	215
8			10	3.0	78	22.6	225	66 8	16	7 7			337
9	6	1 6	46	12.0	125	32.7	198	51 8	7	1.8			382
10	31	7 5	107	26.0	135	32.9	132	32 1	3	7	3	7	411
11	29	7.3	107	27 1	130	35.2	112	28 4	8	2 0			395
12	47	10.3	140	30 6	132	28 9	129	28 2	9	2 0			457
13	48	15.1	99	31.1	103	32.4	67	21.1	1	3			318
14	35	17 4	87	43.3	51	25.4	25	12.4	3	1 5			201
15	14	16 1	46	52.9	22	25.3	5	5 8					87
16 and over	15	62.5	7	29 2	2	8.3							24
Total	225	7.8	649	22.5	807	28 0	1,096	38 0	100	3.5	9	.3	2,886

Graph 3 pictures these facts and relationships. It will be noted that a consideration of percentile ranks serves to corroborate the generalizations brought out in this study.

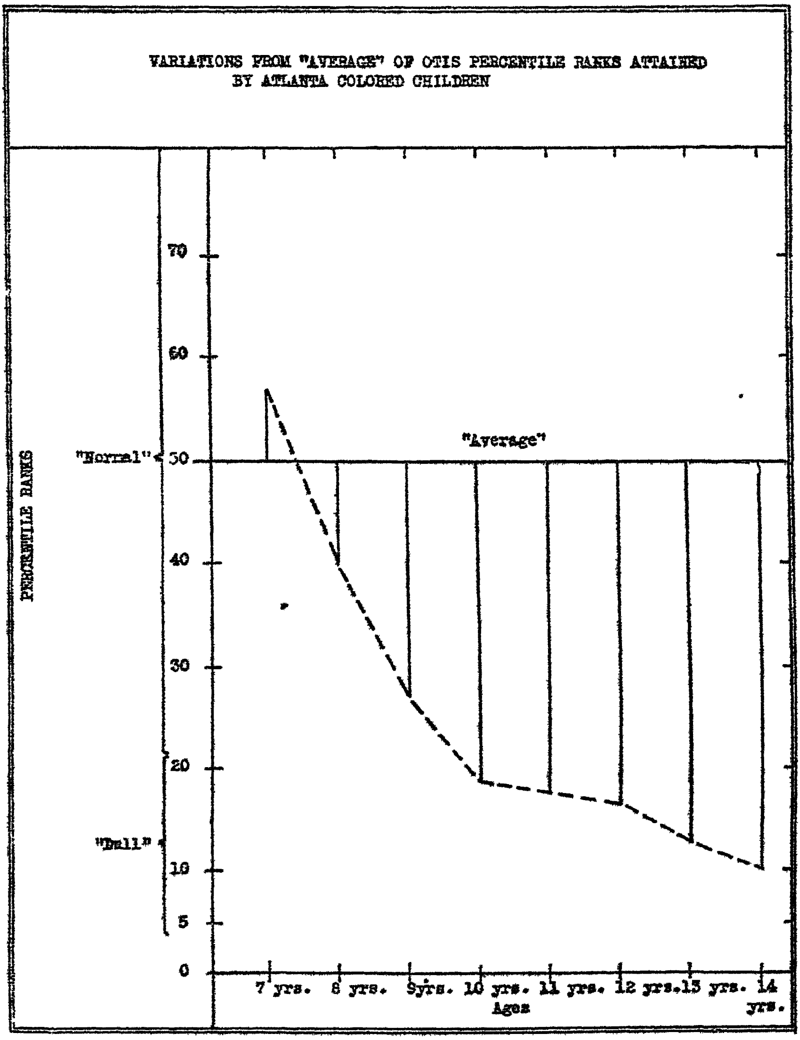

Fig 3.

Table 6.—*Otis percentile ranks and variabilities—Atlanta negro children*

Age	Number of cases	Mean percentile ranks	Probable error	Standard deviation of distribution	Probable error
7	215	56 64	±1.07	23.[illegible]	±0 76
8	337	39 70	± 89	24 [illegible]	±.63
9	782	26.95	± 72	20 96	±.51
10	411	18 73	±.67	20.26	±.48
11	[illegible]	17 69	±.67	19.[illegible]	±.48
12	[illegible]	16 50	±.60	19.[illegible]	±.43
13	318	12 58	±.56	14.72	±.39
14	201	10 06	±.73	15 38	±.52

It is interesting to note that the results here presented are not at variance with those of other investigators. In 1923-24 a survey of specially handicapped children was made in the State of Illinois, and a preliminary report [12] has been published. This distribution table [13] shows the negroes to have lower averages and lower variabilities than the whites. A further analysis of data from this survey gives the racial comparisons shown in Table A The scores from group and individual tests were all reduced to terms of intelligence quotients.

TABLE A —*Differences between I Q scores of whites and negroes—Illinois survey*

Age	Difference	Age	Difference	Age	Difference	Age	Difference
6	10 6±1 3	9	20 1±1 3	12	26 7±1 0	15	18 7±1 6
7	17 3±1 9	10	25 2±1 1	13	31 0±1 1	16, 17	15 1±2 2
8	19 6±1 9	11	29 1±1 2	14	22 0±1 4		

These children come from the first eight grades and the greater part of the negroes, as of the whites, are classed as "urbans." The difference tends to become larger with age—at least through age 13, beyond which point there is the possibility of selection and retardation again being operative. These figures, though obtained from subjects in a different part of the country and living under different social conditions, and though the data were secured from other tests administered by other examiners, obviously support the conclusions derived from the Atlanta study.

III. The Individual Examinations

The individual examinations followed the group tests in each school. As has been stated, as many as possible of those who made low scores on the Otis tests—generally those with percentile ranks of "5" or below—were given further examination. Similar individual tests were given to a number of psychologically unselected 6 and 7 year old first graders, and also to such special or problem cases as were referred by principals and teachers. There is available for study the results of 604 individual examinations, though all of the performance tests were not given to all of these children.

The Stanford revision of the Binet-Simon Scale was used as the basic test in all the individual examinations and was believed to yield the most reliable data for individual diagnosis. The Kohs Block-Design test was given to 201 children, and was then dropped from the schedule. In view of the poor work done on this test by most of the negro children, the examiner thought that sufficient material

[12] Adler, Herman M Report of the Survey of the Specially Handicapped Children in the State of Illinois. State publication, 1925.

[13] Ibid., p. 11.

had been collected to show a racial inaptitude for this type of performance and that the time could be better devoted to securing data with other psychomotor tests. Thereafter, the Lincoln Hollow Square form of board was used with most of the children, giving records, in 369 cases, of the number of problems solved within the one minute time limit, and also of the average seconds per problem. In calculating the last item the time was taken, to the nearest second, of each problem solved within the minute, each failure was given a score of 90 seconds, and the total time was divided by 8, the number of problems. Healy Construction Test A was used in 274 cases. The procedure differed somewhat from the generally prescribed one in that the work was discontinued if the problem remained unsolved at the end of three minutes, whereas the standard time limit is five minutes. This was done because decided difficulty was experienced in inducing most of the children to continue their efforts even as long as the three minutes. The great majority of those who did not succeed within a much shorter time lost interest or became discouraged. They frequently stopped and urging was necessary to get them to work until the end of the shorter interval. If the child failed, he was quietly shown how to fit in the pieces—unsupplemented by any verbal explanation—and in any case a second trial was given. If the first trial was a success, the child was asked to see whether he could do it more quickly next time. Five trials were given and in every case where the preceding one had been unsuccessful, the child was shown before being asked to try again. In computing the total time for the five trials, 180 seconds was used as the score for each failure.

Table 7 gives the intercorrelations of the test scores [14] and Table 8 gives the same correlations, with the factor of age distributed or held constant. The coefficients are naturally lowered in the second instance, since, in a group of varied ages, the mere factor of chronological age rather than that of relative intelligence for age, is responsible for the fact that many correlations are high. The child who does well in one test is likely to do well in another, *because he is older* rather than because he is proportionately more intelligent than the younger child who makes lower scorings on both.

[14] In calculating the correlations for the first trial of "Healy A" test the failures are placed at 180 seconds. Placing them at 300, the standard time limit, raises the correlation with the Otis Primary Score from −0 169 to −0 175. The correlation with the Lincoln test, average seconds per problem (0 078) becomes 0.100 if the failures are valued at 400, and −0 282 if the 108 failures are eliminated altogether. Omitting the failures from the calculation is ignoring a large and significant part of the data, and obviously gives an erroneous coefficient, since it implies that the cases used are believed to be typical of all The question of the fair placement of the failures is not so easily settled, but within the limits experimented with, the resultant difference to the correlation seems quite small. In subsequent calculations based upon these coefficients, our arbitrary placing of failure at 180 gives prediction scores more favorable to the children studied than had a higher value been used.

TABLE 7.—*Test intercorrelations—Atlanta negro children*

CORRELATION COEFFICIENT

[Otis Percentile Rank—Binet I Q = 0.377±0.027, number cases = 462]

	Age	Otis group test, total score		Stanford-Binet, mental age	Lincoln Hollow Square	
		Advanced	Primary		Number of problems	Average seconds per problem
Otis						
Advanced	0.027±0.021					
Primary	.447± .012					
Binet Mental age	.719± .013					
Kohs Points	.306± .041		0.410±0.046	0.505±0.035		
Lincoln						
Number of problems	.584± .023	−0.007±0.064	.346± .045	.583± .023		
Av seconds per problem	[1]− .600± .023	[1]− .653± .057	[1]− .371± .044	[1]− .598± .023		
Healy A						
Time, 1st trial	[1]− .119± .040	[1] .131± .066	[1]− .169± .052	[1]− .119± .040	[1]−0.090±0.042	0.078±0.042
Total time, 5 trials	[1]− .209± .039	[1]− .776± .027	[1]− .309± .049	[1]− .250± .039	[1]− .183± .041	.170± .041

NUMBER CASES

	Age	Advanced	Primary	Stanford-Binet, mental age	Number of problems	Average seconds per problem
Otis						
Advanced	1,001					
Primary	1,885					
Binet Mental age	604					
Kohs Points	201		147	201		
Lincoln						
Number of problems	369	109	171	369		
Av seconds per problem	368	108	171	368		
Healy A						
Time, 1st trial	274	101	157	274	258	257
Total time, 5 trials	267	100	152	267	254	253

[1] In a correlation of "time" scores with point scores or ratings wherein increase in excellence is denoted by figures of increasing magnitude, a negative coefficient naturally has a positive meaning and indicates a positive relationship between achievements in the two performances, and vice versa.

TABLE 8.—*Test intercorrelation, age constant—Atlanta negro children*

	Otis group test, total score		Stanford, Binet, mental age	Lincoln Hollow Square	
	Advanced	Primary		Number of problems	Average seconds per problem
Kohs, Points		0.29	0.37		
Lincoln					
Number of problems	−0.02	.12	.29		
Average seconds per problem	[1]− .80	[1]− .14	[1]− .30		
Healy A:					
Time, 1st trial	.13	[1]− .13	[1]− .05	[1]−0.03	0.01
Total time, 5 trials	[1]− .79	[1]− .25	[1]− .15	[1]− .08	.06

[1] See footnote to Table 7

Binet mental age and the two measures of the Lincoln test are seen to be the most dependent upon chronological age, and the advanced Otis test the least so. The last should not be unexpected when we consider that a large part of the Otis scores are obtained from the

older, retarded children Kohs and Lincoln tests yield the highest correlations with the Binet—probably the most dependable single measuring instrument—when the effect of age upon the relationships is eliminated. The correlation of Otis percentile rank and Binet intelligence quotient is positive and, in the light of its probable error, quite reliable; but the coefficient (0.377±0.027) does not seem as large as might have been expected in the case of two indices each of which is, in itself, a measure of brightness irrespective of age. The first trial of the Healy test, if it measures anything at all in this group of children, measures something that seems to be quite different from what is measured by all the other tests—the coefficients, age constant, ranging from −0 13 to 0 13. The total time of five trials on the Healy, however (see Table 8), has a decidedly high correspondence (−0 79) with the Otis Advanced, and a real, though not as marked, correlation with the Otis Primary (−0 25). The average seconds per problem on the Lincoln also seems to be an excellent indication of accomplishment on the Advanced Otis (−0 80). It is interesting to note the four low correlations between the Lincoln and the Healy Tests (0.01–0 08), though both are psychomotor problems of the form board type and proficiency in the two might have been expected to be closely related. On the contrary, however, facility in handling the one test seems to give us no prediction of what may be expected with the others.

If attempt is made to summarize and generalize from these correlations, there would seem to be justification in saying that the Kohs test gives a fairly good measure of intelligence as gauged by the Binet and the Otis primary tests. The Lincoln test also corresponds satisfactorily with the verbal tests—provided the relationship between the number of problems solved in the former and the score on the Otis Advanced be excepted. This does not seem contradictory when it is considered that there are only eight problems, and that these, being designed for younger children, do not give an adequate range for the older subjects of the Otis Advanced. The Healy test seems to have little in common with the other measures, if only the first trial on the construction problem is considered, but the total time of five trials does give an excellent indication of accomplishment with the Otis Advanced and a very good one with the Otis Primary. The Lincoln and the Healy tests apparently do not measure the same thing.

1. THE STANFORD BINET TEST

Due to the nature of the selection of cases for individual examination in the study, largely by inferior performance on the Otis scale, the data are not such as are capable of yielding objectively adequate measures of racial performance. There are, however, unselected

groups of 6 and 7 year children, whose showing on the Binet scale is interesting to consider. Table 9 gives the comparative scores of the two ages.

TABLE 9.—*Stanford-Binet scores of unselected 6 and 7 year old negro children*

Age	Number of cases	Mental age: Mean (years-months)	Mental age: Probable error (month)	Mental age: Standard deviation of distribution	Mental age: Probable error	Intelligence quotient: Mean	Intelligence quotient: Probable error	Intelligence quotient: Standard deviation of distribution	Intelligence quotient: Probable error
6	54	6-9.7	±0.87	9.43	±0.61	103.2	±1.04	11.32	±.73
7	51	7-0.3	±.83	8.76	±.58	94.8	±1.01	10.72	±.72
		Months		Probable error of difference		Intelligence quotient		Probable error of difference	
Differences[1]		2.6		±1.20		−8.5		±1.45	

[1] Minus sign indicates score of 7 year olds is lower than 6 year olds

In considering totality of performance, as is done in this table, it is noted that, in terms of mental age and of intelligence quotient, both 6 and 7 year groups are thoroughly "normal" by American white averages. There is the same falling off with age, relative to white standards, that was noted consistently in the study of the Otis test results The difference in intelligence quotient between the ages (-8.5 ± 1.45) is quite reliable statistically and is the more significant since it reinforces conclusions drawn from other data,[15] and gives some indication of the age at which this increasing "slowing-up" in mental development on the part of the group studied can first be observed.

The Stanford-Binet test is capable of yielding much information of a qualitative kind on the types of performances at which the subjects do their relative best and worst; but this has not been attempted in the present paper. The examiner's observations, however, while they are not offered as accurately calculated statistical findings, may not be without interest, regardless of their partly subjective nature. There was noted what may be described as lack of sensory discrimination in various fields, coexistent with inability to criticise or see discrepancies between accomplishment and the ideal or pattern. Illustrative of this, for example, are inferior work with weight discrimination (IX_2), in giving rhymes (IX_6), and in many instances of word definition, as well as in some performance tests which will be discussed in a later section. With reference to inaccurate interpretation of verbal stimuli, it is interesting to note that, even after the difference in spelling and in pronunciation between the given word and the one

[15] The writer in an unpublished M. A thesis found that with negro children, aged 8-12, from the colored public schools of Lexington, Ky., all ages made averages inferior to those of whites, on a summation of points from several individual tests of the Cornell series, but differences between race averages were similar at each successive year.

with which it was confused had been pointed out, large numbers—in fact it seemed most of the children—persisted in intepreting "copper" (vocabulary test) as "copy," "pork" as "poke," "lecture" as "electric" or "election," and "civil" as "silver." In like manner, it seemed that the great majority of children defined "charity" (XII_2) as "something to ride in" or "a hearse," and "justice" as " 'cute' ingestion" (acute indigestion). In other words, a vague similarity of sound with some better known word was sufficient to prevent them from getting an accurate auditory conception of the one in question. It also seemed that they were relatively inferior in repeating digits backward and in copying the diamond (VII_6). The tests in which they seemed most proficient were those of a practical nature, such as knowing coins (VI_5) and tying a bow (VII_4). They also gave the impression of doing well in auditory rote memory and in interpretation of pictures (XII_8—verbal imagination?). To summarize, the examiner's belief is that they do best at practical and rote performances, and poorest at those performances involving discrimination and critical accuracy.[16]

Upon qualitative race differences comparatively little work has been done Two recent articles [17] reporting experimental investigations with white and negro children, stress the need for analytical study of the individual rather than for the creation of race norms in terms of general intelligence.

2. KOHS BLOCK DESIGN TEST

In Kohs block-design test the subject is required to reproduce, with a set of colored cubes, certain color-form designs which are drawn on cards. The designs vary in size and complexity, and a point scale has been worked out which makes deductions from each maximum design value for excess time and moves. The final point score may be interpreted into "mental age." The method of procedure described by Kohs [18] was followed by the examiner in administering and scoring this test.

The impression was soon gathered that this test held special difficulties for the negroes; their score on the block designs seemed to be much inferior to their showing on the Binet test. Especially striking was what appeared to be an inability to criticize their own work, to recognize a failure as such, a tendency to offer a markedly erroneous

[16] The writer's study, previously referred to, showed, by quantitative measurement, the negroes studied to be superior to the whites in immediate memory for familiar objects, but inferior in processes involving reasoning and judgment and in mental content or fertility of ideas.

[17] Sunne, Dagny Comparison of White and Negro Children by the Terman and Yerkes Bridges Revision of the Binet Tests Peterson, Joseph: Lanier, Lyle H , and Walker, H. M. Comparison of White and Negro Children in Certain Ingenuity and Speed Tests Both articles in The Journal of Comparative Psychology, Vol V, No. 3, June, 1925.

[18] Op cit, pp. 64-77.

solution with an apparent self-assurance of its correctness. This is decidedly in keeping with the general type of performance discussed in the preceding section on the Binet tests; accurate analytical and critical work seems difficult for the negro.

The block design test was given to only 14 unselected 6-year-olds—children who were not tested because of low scores on the Otis—and to the same number of unselected 7-year-olds; but regardless of the few cases, something of interest may be gleaned from the results. The mean point scores for the 6 and the 7 year olds, respectively, were 1.4 ± 0.15 and 2.0 ± 0.26; their standard deviations were 0.8 and 1.5. Kohs [19] gives 4 points as the score corresponding to a mental age of 6 years 6 months, and 8 points as the score for 7 years 6 months. It will be remembered that on the Stanford-Binet and the Otis tests, the subjects of this study of these two ages made decidedly favorable showings. It seems, then, that regardless of good general intelligence, as measured by our most reliable tests, the 6 and 7 year old negroes give evidence of inability to handle the block designs. The 2 point score obtained by the 7 years 6 months children coincides with what Kohs considers the norm for 6 years 0 months; and while the 6 years 6 months subjects in the present study average 1.4 point, Kohs makes 1 point the norm for 5 years 7 months.

The remainder of the 201 children who were given the Kohs test were the older ones, most of whom were examined because of inferior scores in the group test; and it is obviously unfair to consider results obtained from such subjects as typical of racial performance. Such evidence as was obtained about the interrelations of the factors of age, Otis score, and Kohs points with the group studied and by means of a regression equation [20] affords *predictions* of the *most probable* Kohs score, the other two factors being held constant. That is, knowing the means and the standard deviations of each of the three factors in question, as well as their intercorrelations, what children of a given age and given score on the Otis would *most probably* average on the block designs can be computed. The ages 8, 10, and 12 have been taken, and for each age the score on the Otis primary which was found (see Table 4) to be the average for that particular age the corresponding predictions for the Kohs have been computed. The predicted block-designs scores are as follows: 8 years, 3.3 points; 10 years, 6.1 points; 12 years, 8.6 points. This means that for children of an average age of 8 years 6 months, whose work on the Otis primary test is average for this age, and who therefore are *not*

[19] Ibid, p 73

[20] T. L. Kelley's regression equation for three variables is.

$$X_1 = r_{12.3}\frac{\sigma_{1.23}}{\sigma_{2.13}}X_2 + r_{13.2}\frac{\sigma_{1.23}}{\sigma_{3.12}}X$$

the selected inferiors that the actual present subjects were, the most probable score on the Kohs test would be 3 3 points It must be emphasized that these figures can not be presented with the finality, and must not be accepted with the confidence, that more strictly empirical data (objectively obtained measures) would justify. All they tell is that, in the light of the present data, the mutual interrelations of the factors considered afford the belief that the predicted scores indicate the general trend and are the most probable averages With this word of warning about their interpretations, the results yielded by the regression equation may be considered briefly.

When these predicted scores for 8, 10, and 12 year old children are compared with Kohs's norms for each of these mid-year points, the discrepancies are somewhat startling The predictions made for these ages are, in order, 3.3, 6 1, and 8.6; Kohs's norms are 14, 30, 54.

Comment concerning the writer's findings with Chinese children on this test may be of interest [21] Sixty-three Chinese 12-year olds made an average of 65.4 points on this test This score, the mental age equivalent of 13 years 4 months, surpasses their average Binet mental age (11 years 5 months) and even their chronological age (12 years 6 months) The Chinese apparently show a special facility in handling this type of problem—one which is beyond both their Binet performance and the American average for children of their years—whereas the negroes in the group under study showed a marked disability in this line of work, their scores herein being inferior to white norms and to their own records in verbal tests. Here, apparently, is a measure of racial differences, though just what the true significance of the measure is would be more difficult to say.

It will be remembered that Kohs test bore a higher correlation with the Stanford-Binet age constant than did either of the other performance tests used with this negro group. The coefficient (0.37), while very good for the correlation of a verbal with a performance test, is not high as test intercorrelations between verbal tests generally run, and is lower than the correlation between block designs and Binet (0 49) in the case of the Chinese 12-year olds referred to, and lower than the similar correlation coefficient (0 83) obtained by Kohs in the case of 366 American white children. It must be concluded, then, that while the negro's ability to solve the block designs is slightly concommitant with general intelligence as measured by other and surer means, his block-design ability lags decidedly behind his general ability and indicates a special racial inferiority in the factors that contribute to success at this type of work.

[21] Graham, Virginia Taylor The Intelligence of Chinese Children in San Francisco Journal of Comparative Psychology, Vol VI, No 1, 1926, pp 55-56.

3. THE LINCOLN HOLLOW SQUARE TEST

This test consists of eight problems, of the form board type, which vary in difficulty. The scoring in this investigation, in terms of number of problems solved within one minute, and of average seconds per problem, has already been described.

As with the Kohs test, the objective data for unselected 6 and 7 year olds (37 and 33 cases, respectively), can be given, but they must be confined to predictions obtained from regression equations for the higher ages. Table 10 gives these figures.

TABLE 10.—*Scores on Lincoln hollow-square test—Atlanta negro children*

A. ACTUAL MEASURE

Age	Cases	Number of problems solved: Means	Number of problems solved: Standard deviation	Average number of seconds per problem: Means	Average number of seconds per problem: Standard deviation
6	37	4.5±0.13	1.2	55±1.17	11
7	33	4.9±.19	1.6	52±1.55	13

B. PREDICTIONS

1. AGE AND OTIS PRIMARY CONSTANT

8		5.3		48	
10		6.2		39	
12		7.1		31	

2. AGES AND OTIS ADVANCED CONSTANT

11		5.4		47	
12		6.0		40	

There is little or nothing with which these results may be compared. The originators of the test give data [22] from only 35 children, and nothing is known about their selection of cases. There were seven 6-year olds, and seven 7-year olds among their subjects. The median total time (and in calculating total time each incomplete problem is given a score of 60 seconds, instead of 90 as was used in computing the average seconds per problem) is 165 seconds for the 6-year group and 170 for the 7-year. This is obviously very inadequate for a comparison, but it seems to indicate that Lincoln's subjects did better than those of this study—both with respect to number of problems solved and to time of solving.

Referring again to Tables 7 and 8, it will be recalled that the Lincoln test had a fairly satisfactory correlation with verbal tests of intelligence and with age. The coefficients seem to indicate that the time

[22] Op. cit., pp 56-59.

measure is a better index than is the number of problems, though the latter seems satisfactory with younger children.

With reference to the predicted scores, holding constant the Otis primary gives results that are more favorable to the negro than does distributing the Otis advanced, and since the "primary" group is less weighted with retarded cases, it is probably no more than fair to accept these better scores as being the more nearly correct.

On the Lincoln test, the present subjects seemed to do better at each successive age, both with respect to the number of problems solved and to the time of solving them. The test correlates to some extent with verbal intelligence tests, but not with the Healy construction A There are available no comparable data on which to base an estimate of how well or how poorly the negro children do on the test, with reference to the accomplishment of children of any other race.

4 HEALY CONSTRUCTION A

As has been pointed out previously, the time required for the first solution of the Healy A seems to be completely unrelated to any of the other tests or measures, so far as this negro group is concerned. The total time of the five trials, however, does bear some relationship to accomplishment in the verbal tests, and a marked one in the case of the Otis advanced Unfortunately, all the comparable data available are in terms of time on the first trial, which, it is felt, is a psychologically unknown measure, perhaps influenced largely by chance. Children have often been seen to solve the puzzle comparatively quickly the first time, only to fail or take an inordinately long time on succeeding trials. The total time for five trials seems to be a more significant index.

As Pintner and Paterson [23] point out, there has been some disagreement in the norms offered by several investigators. Their own are probably the best basis of comparison, since, aside from being derived from a comparatively large number of cases (1,005), they are the ones that are most generally accepted. Despite great variability in individual performances at all ages, their medians [24] show a steady decrease with age As might be expected with data selected as in the case in this study, the actual medians of the group under study are most erratic, so again resort is had to predicted averages as the safest indication of performance. Table 11 gives the best that is afforded in the way of racial comparisons on this test.

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[23] Op cit, pp 44-53, 122-126

[24] Ibid, p. 123

TABLE 11.—*Predicted scores of Atlanta negro children, compared with white norms on Healy construction A test*

NEGROES—AGE AND OTIS SCORE CONSTANT—PREDICTION

	Primary test			Advanced test	
Age	8	10	12	11	12
Time First trial	129	120	112	128	124
Total time	263	229	200	267	228

WHITE NORMS—MEDIANS—PINTNER AND PATERSON

Time First trial	117	70	46		

Again preference is given to the predictions based on the Primary rather than on the Advanced examination; they are more favorable to the group With reference to time on the first trial, these figures indicate the white to be more successful in the solution of this problem. The scores of the two races are closer together at the lower ages

Little can be said about the significance of this test Just what factors are involved in this type of problem solving it would be difficult to say; "appreciation of form-space relationships" and "psycho-motor ability," are somewhat vague phrases, and it would be reverting to an outgrown "faculty psychology" if attempt were made to extract herefrom the indicators of more specific "abilities." Nor is there objective criteria to indicate the practical or industrial aptitudes of which the test is a measure. When the five trials are used, and the problem becomes a learning test, still other psychological elements are introduced; but further and fuller analysis is needed to determine the value of the form board as a prediction of social or economic adequacy, either general or specific.

IV. Summary and Conclusions

In this study no pretense is made of having adequately analyzed negro intelligence from the qualitative standpoint. Nor is it believed that any of these tests are magic or infallible indicators of the thing called general intelligence. A clinician is only too well aware of the distorting influence of the conditions known as "attitudes" and "interests"; and intelligence, in itself, remains too much of an unknown quantity to be dogmatized about. This study has been based upon results obtained from the use of a group test (Otis) that is generally accepted as a good measure of general ability, of an individual test (Stanford Binet) that is conceded to be the most accurate and dependable measuring rod, and upon several performance tests (Kohs block design, Lincoln hollow square, and Healy

construction A), about the specific indications of which less can be said with definiteness

The ideal procedure in such a racial investigation would seem to be, of course, to compare groups of white and negro children that had been subjected to the same social and educational influences, that is, to measure test performance, experience being held constant Such a method is, however, practically impossible Comparisons have, therefore, been based upon norms secured from large numbers of white children in various parts of the country, and an attempt has been made to eliminate such factors as seemed, *a priori*, to put the negro at a disadvantage Moreover, considering the probable discrepancy in status between the white and the negro children compared in this paper, the comment may be pertinent as to whether, had their environments been the same, the selected groups would not have been as representative of the respective races as are the ones used.

Taking the results "behavioristically," without any over-interpretations, as objective data accumulated through the scientific method of "controlled stimulus and measured response," the comparative records of the races are significant. The results found in the present study may be summarized briefly as follows:

1 On various mental tests the negro children, except at early ages, made averages that are lower than the averages of white children.

2. The discrepancy in test scores between the races increases with age, after the sixth year, and becomes quite marked by the eleventh year.

3. Variability of performance within each of the races was found, as many investigators state, to be greater than the difference between the two. The differences between the averages are reliable, however, and are constant in direction

4 In most instances greater variability of performance is shown among the whites than among the colored This increases the probability of extreme cases in the former race; and since their means are generally higher, it increases the probability of superior scores. The negro group, on the other hand, tends to hang a little closer around their lower average

5 On tests of special performance—nonverbal tests and specific parts of verbal scales—the negro children seem to do better at rote and practical tasks than at those that involve behavior which may roughly be described as discriminating, analytical and critical.

6. There seems to be little, if any, real disagreement between the results and conclusions from other related studies and those from the present study, though no attempt has here been made to

review adequately or to analyze the complete literature that is available on this subject.

No attempt is made to state the ultimate significance of these test results. Probably no one is in a position adequately to define and analyze intelligence, and the real value of many of the measures thereof is still a debatable question. The only justifiable claim of mental testing is the pragmatic one of furnishing a reliable prediction of general social and economic efficiency. The science rests upon an empirical foundation; and correctly standardized tests, though they may not differentiate and analyze endo-psychic factors, have been found to provide a basis for predictions of social and economic adequacy that have undeniable reliability.

Appendix

OTIS INTELLIGENCE TESTS BY PERCENTILE RANK

Number of children in each grade and of each age, classified according to percentile rank.—Unselected negro school children in Atlanta, Ga., 1925–26

Age	Grade	0–0.49	0.50–0.99	1.0–4.99	5.0–9.0	10–14	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85–89	90–94	95–	Total
6	1								2		1	1		2	1	4	6	1	5	2	2	1	1	29
	2									1		1	2	6		3	3	1	4	3	3	1	1	29
	3																					1		1
Total									2	1	1	2	2	8	1	7	9	2	9	5	5	3	2	59
7	1									2	2	1	1	2	2	2	2	1	3	2	1	1		22
	2				2	6	13	8	6	5	10	2	8	11	15	15	15	8	13	6	7	5		155
	3						1	1			2		5	3	1	2	3	3	5	1	2	3	4	36
	4																				1	1		2
Total					2	6	14	9	6	7	14	3	14	16	18	19	20	12	21	9	11	10	4	215
8	1				1		1	1	2	1		1	2			1		1						11
	2			9	18	21	19	17	23	11	21	5	6	10	7	6	5	3	4	4	2	1		192
	3			1	2	8	5	9	5	6	4	4	11	10	5	8	7	4	5	4	3	3		104
	4				1			3			1	3	1	1	1	1	4	1	3	6	1	1		28
	5																		1			1		2
Total				10	22	29	25	30	30	18	26	13	20	21	13	16	16	9	13	14	6	6		337
9	1	1							1		1													3
	2	3	5	24	20	24	10	10	8	5	3	2	1	2		2	1			1				121
	3	1	2	14	16	17	18	15	13	9	9	7	10	8	2	5	2	3	1	1				153
	4	1		1	6	8	4	5	9	10	6	3	6	10	5	3	2	4	2	2	1	1		89
	5					2		2	2	2	1			1	3	1	1					1		16
Total		6	7	39	42	51	32	32	33	26	20	12	17	21	10	11	6	7	3	4	1	2		382
10	1	2	1	1		1		1																6
	2	21	8	31	15	12	6	2	5		1			1										102
	3	7	4	35	15	19	2	6	8	4	1	1	1	2	1									106
	4	1	6	20	17	16	12	7	5	8	3	2	3	5	4	1	1	1	1	1				111
	5			1	6	9	4	7	5	7	3	1	4	3	3	1	1		1				1	57
	6					1			2	3	2		1	2	2	3	3		3	1		1	2	26
Total		31	19	88	53	58	24	23	25	22	10	4	9	13	10	5	5	1	5	2		1	3	411

Number of children in each grade and of each age, classified according to percentile rank—Unselected negro school children in Atlanta, Ga., 1925–26—Continued

Age	Grade	0-0.49	0.50-0.99	1.0-4.99	5.0-9.9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-	Total
11	1	2	1	1																				4
	2	14	3	11	10	1		1		1			1											42
	3	9	8	27	11	9	4	3	1	1	1			1										75
	4	4	8	30	25	5	7	6	7	1		1												94
	5		1	17	21	12	14	5	9	4	3	6	1	3	2	1	2							100
	6				5	7	9	4	3	7	9	6	4	5	5	2	1	2	3	2	3	3		80
Total		29	21	*86	72	34	33	19	20	14	13	13	6	9	7	3	3	2	3	2	3	3		395
12	1			2		1		1																4
	2	19	2	11	2	2																		36
	3	11	11	19	8	5	1	2		2	1													60
	4	15	11	34	16	14	7	7	3	1	2	1												111
	5	2	2	44	20	15	8	8	5	6	6	1	1	1	1						1			120
	6			5	12	11	10	12	12	11	8	7	6	6	7	3	5	1	2	4	2	2		126
Total		47	26	114	58	48	26	30	20	20	17	9	7	7	8	3	5	1	2	4	3	2		457
13	2	15																						15
	3	10	6	8	1	2		1																28
	4	14	3	14	12	2	5		2				1											53
	5	7	10	17	22	5	3	2	2	1	2	3	1	1		1								97
	6	2		21	15	24	12	15	7	6	4	4		4	2	1		1		1				125
Total		48	19	80	50	33	20	18	11	7	6	7	8	5	2	2		1		1				318
14	2	3			1																			4
	3	4		5																				9
	4	8	3	13	4	1	4	1	4															38
	5	15	16	23	5	6		1			2													68
	6	5	4	23	15	10	5	2	4	4	1	1	1	1	1		1	1			2	1		82
Total		35	23	64	25	17	9	4	8	4	3	1	1	1	1		1	1			2	1		201
15	2			1																				1
	3	1		1																				2
	4	3		1	2																			6
	5	6	4	9																				19
	6	4	7	23	10	5	5	3	1		1													59
Total		11	11	3[illegible]	12	5	5	3	1		1													87

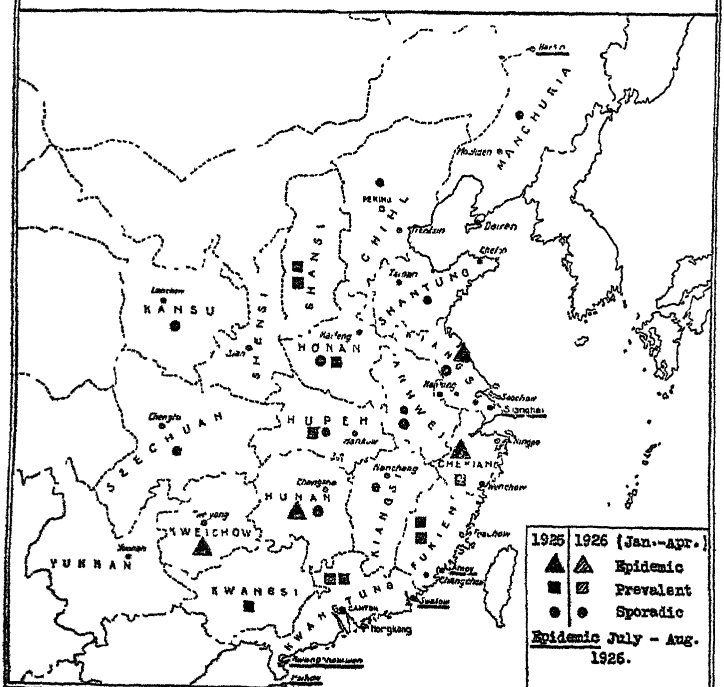
16	5	4	1																					5
	6	7	1	4	1		1																	14
Total		11	2	4	1		1																	19
17	5	3																						3
	6		1																					1
Total		3	1																					4
19	5	1																						1

CURRENT WORLD PREVALENCE OF DISEASE

REVIEW OF THE MONTHLY EPIDEMIOLOGICAL REPORT ISSUED SEPTEMBER 15, 1926, BY THE HEALTH SECTION OF THE LEAGUE OF NATIONS' SECRETARIAT [1]

Additional information concerning the cholera outbreaks in China and other parts of the Far East during the spring and summer months is made available in the September Epidemiological Report, published at Geneva by the health section of the League of Nations' secretariat. While the epidemic at Shanghai, referred to in last month's report, declined during August (see table below), outbreaks were reported in Amoy and in Harbin, Manchuria, about the middle of

CHOLERA IN CHINA IN 1925 AND 1926



August; also a few cases occurred in Port Arthur and Dairen. A number of deaths from cholera were reported at Swatow in July, and rather serious outbreaks occurred at Hoihow on the island of Hainan, where 386 cases were reported in four weeks in May and 365 cases in four weeks in July. At Kwang-Chow-Wan the number of new cholera cases continued to increase during August, and 483 cases were reported as against 354 in July. In general the cholera situation in China gave cause for some anxiety at the beginning of the month of September.

While current figures for China as a whole are unobtainable, of course, the information gathered by the National Epidemic Prevention Bureau at Pekin from hospitals and practitioners of western medicine gives a good indication of the epidemic situation in the various Provinces This information was available only up to April, but at that time cholera was said to be of frequent occurrence in the two southern coast Provinces of Kwang-tung and Fukien, but not to exist elsewhere Notes from this source seem to indicate that, during the 12 months from May, 1925, to April, 1926, no Province of China was entirely free from cholera. The southern and central coast Provinces and the two inland Provinces of Kweichow and Hunan were most affected, while cases seem to have been rare in the western Provinces On the accompanying map of China some indication of the prevalence of the disease in the various Provinces in 1925 and in the first four months of 1926 is given, and the towns where outbreaks were reported in the past summer have been underlined

In southeastern Asia the cholera situation improved during the summer. In Siam 674 cases were reported in the whole country during the four weeks ended August 14, compared with 1,413 during the previous four weeks. In French Indo-China, where 722 cases were reported in August as compared with 1,768 in July, the situation showed marked improvement, and the principal ports were reported free from cholera.

The cholera deaths reported in India in the two weeks ending July 31 numbered 2,499, compared with 4,908 in the corresponding period of 1925 Western and northwestern India were practically free from cholera, and Bihar and Orissa and Madras Presidency showed the highest incidence. No unusual prevalence occurred in the Indian ports.

TABLE I.—*Cholera cases reported in the principal maritime towns of the Far East from August 1 to September 11, 1926*

Towns	Number reported in week ending—					
	August—			September—		
	7	14	21	28	4	11
Negapatam (deaths)	3	5	5	0	0	1
Madras (deaths)	1	0	0	0	1	0
Calcutta (deaths)	11	5	9	10	13	18
Rangoon (deaths)	1	----	0	1	0	0
Bankok (cases)	8	2	0	2	3	7
Saigon and Cholan (cases)	1	0	0	0	0	0
Amoy (cases)	0	2	11	16	38	53
Shanghai (cases)	333	171	141	100	122	57
Port Arthur (cases)	0	0	0	2	0	0
Dairen (cases)	0	0	0	1	2	2
Yokohama (cases)	0	0	0	1	0	0
Harbin (cases)	0	36	95	66	46	27

Plague.—"Returns for August show a relative quiescence of plague in its principal centers, as is usual at this season," says the report. In the Mediterranean countries the only cases reported during the month were 4 at Constantinople, 2 in Greece, 2 in Algeria, 1 in Tunisia, and 1 in Egypt, at Alexandria

In the Union of South Africa only 2 cases of plague were reported in August as against 11 in July. No cases have been reported from Tanganyika Territory since last November, and in Mauritius the one case reported during July was the first since last December In Madagascar plague reached its lowest incidence during July with 16 cases, and an increase occurred in the first half of August when 30 cases were reported.

In Senegal and Uganda the incidence of plague has been higher than in the previous year. During May and June 321 cases were reported in Senegal, compared with 95 cases the corresponding period of 1925, which was, however, an unusually low year. In Uganda the number of cases was declining somewhat in July, but between January 1 and August 7, 1,128 cases had been reported compared with 470 cases during the corresponding period of the previous year.

Plague cases reported in India during the two weeks ending July 31 numbered 562 as against 490 in the corresponding two weeks last year; 179 cases were reported in Bombay Presidency, 91 in Madras Presidency, and 226 in Mysore.

In Java there were 139 deaths from plague in the four weeks ending July 17 as against 461 and 518 deaths, respectively, in the corresponding periods of 1925 and 1924

In Siam only 1 case of plague was reported in July, and in French Indo-China there were 22 cases reported in July and 12 in August

Japan reported 9 cases of plague in July, all in the Province of Kanagawa and 6 of them at Yokohama. There was no case in August.

Yellow fever.—The following cases of yellow fever were reported:

Africa
- Gold Coast—June, 2 cases, 1 death.
- Nigeria—June, 1 case, 1 death.

South America
- Brazil—
  - Parahibo—April, 40 cases, 8 deaths.
  - Rio Grande del Norte—April, 50 cases, no deaths.

Smallpox.—The outbreak of smallpox which began early in the year in Japan evidently had come to an end in August, for only nine cases were reported in the first two weeks of the month. The total cases reported in the first seven months of the year numbered 1,219.

Smallpox was reported to be prevalent in all parts of China in March and April, and epidemics were indicated in the Provinces of

Chihli, Honan, Chekiang, Fukien, and Kweichow. "As elsewhere in the Northern Hemisphere," says the Report, "smallpox seems to be most prevalent in April, least in September"

The smallpox cases in European Russia, excluding the Ukraine, in April totaled 373 as against 1,060 in April, 1925, and 2,480 in April, 1924. Only 22 cases were reported in the Ukraine in April and 27 in May

A marked seasonal decrease in smallpox occurred in England during July and August; 291 cases were reported during the four weeks ended August 14, compared with 585 during the previous four weeks

A severe smallpox epidemic of virulent type was reported in July at Rio de Janeiro.

In the United States there were 592 cases reported by 38 States during the first fortnight of August, compared with 367 in the corresponding period of 1925

Dysentery.—The prevalence of dysentery reported by European countries during August is summarized in the following paragraph taken from the Report:

Dysentery has, on the whole, been less prevalent in Central Europe during the past summer than in 1925 There were 616 cases in Germany during the four weeks ended August 28 as against 1,182 cases during the corresponding period of the previous year Fifty-two cases were reported in July in Czecho-Slovakia and 145 cases in Hungary as compared with 127 and 211 cases, respectively, during the corresponding month of 1925 In the Kingdom of the Serbs, Croats, and Slovenes there were 236 cases in August, 1926, as against 301 cases in August, 1925 The disease was, on the contrary, somewhat more prevalent in Poland than in 1925: 1,437 cases were reported during the four weeks ending August 28 as against 1,049 cases during the corresponding period of the previous year. The returns for May for the Ukraine showed a slightly higher incidence than in 1925.

Enteric fever.—Although seasonal increases in enteric fever were evident for most European countries, the July incidence was lower than during the corresponding month of the previous two or three years in nearly all countries. "It would be premature, however, to draw any final conclusions, as yet, on the typhoid fever situation," says the Report, "since the maximum incidence of the disease rarely comes before September, frequently in October, and, at times, as late as November."

Acute poliomyelitis—Both Germany and England reported more cases of poliomyelitis during July and the first two weeks of August than in the corresponding season of 1925, while the other countries

reporting on this disease showed a lower incidence than last year. A comparison of cases in the two years is given in the following table:

TABLE II.—*Cases of poliomyelitis reported in various countries, 1925 and 1926*

4-week period ending—	Germany		England and Wales		Italy		New Zealand		Month	Sweden		Denmark		France	
	1925	1926	1925	1926	1925	1926	1925	1926		1925	1926	1925	1926	1925	1926
Jan 30	17	22	26	17	19	11	167	0	January	34	35	7	1	10	9
Feb 27	23	14	23	20	19	13	409	4	February	20	13	14	3	18	9
Mar 27	21	18	17	14	35	8	356	5	March	13	8	3	2	16	20
Apr 24	18	18	12	14	26	12	197	4	April	13	12	1	2	17	13
May 22	25	22	16	17	26	25	62	0	May	12	8	2	1	11	11
June 19	18	21	15	23	28	28	40	0	June	13	10	4	3	8	8
July 17	20	57	17	26	80	42	14	1	July	13	17	9	3	15	20
Aug 14	31	160	25	98	106	52	12	0	August	84	39	20	9	39	18

Scarlet fever.—The number of cases of scarlet fever in Poland has been increasing steadily since June, and in the week ending September 4, 1,138 cases were reported, more than twice the number in the corresponding week of 1925. In Germany an increase began in August, and at the end of the month the number of cases was greater than in any of the four preceding years. The weekly cases reported by these two countries are shown in the table below. No corresponding increase was noted in the reports from other European countries.

TABLE III.—*Scarlet fever cases reported in Germany and in Poland from July 11 to September 4 of 1925 and 1926*

Week ending—	Germany		Poland	
	1925	1926	1925	1926
July 17	695	733	393	533
July 24	612	714	392	506
July 31	685	699	383	614
Aug 7	663	769	376	693
Aug. 14	607	826	313	645
Aug. 21	782	978	387	804
Aug 28	778	1,008	500	939
Sept 4	806	1,151	437	1,138

WHAT PRICE SMALLPOX [1]

By CHARLES V. CHAPIN, M. D., Superintendent of Health, Providence, R. I., President American Public Health Association

During the last 15 years there have been over 700,000 reported cases of smallpox in the United States. Last year, 1925, there were 39,639 cases. These 39,000 cases were more than occurred in any country furnishing statistics, except India. Even Soviet Russia,

[1] Quoted from the Weekly Bulletin of the Bureau of Public Health of New Mexico, dated Nov. 16, 1926.

with a larger population, had only half as many cases. The 8,000 deaths in Mexico suggest that the cases in that country were probably proportionally more numerous than in the United States, but actual statistics are lacking. What becomes of our boasted superiority in public health when we are more widely infected with the most loathsome of the contagious diseases than is any other country, but Mexico, and when we have to admit our inferiority to the Soviet Republic. This state of things is no chance event of one year. For 15 years and longer we have had more smallpox than any country in western Europe; indeed, generally more than the whole of western Europe. In 1921 we had reported over 100,000 cases of this disease

Some people are saying, "Suppose we do have a lot of smallpox; what of it? It is a very mild type of the disease It never kills anybody I had rather have it than vaccination. With modern sanitation and our cleanly habits the old loathsome smallpox has become extinct"

Has the reader ever seen a case of "mild smallpox"? If he has, certainly if "*she*" has, neither would ever prefer it to vaccination. A year ago there was an outbreak of some 50 cases of mild smallpox in the vicinity of Providence Out of the kindliness of our hearts we took four of the patients into our city hospital. They all had backache, headache, and some fever for a few days They then felt better and could sit up. The bodies, and especially the faces, of all were covered with pustules They were almost thick enough to run together. We counted nearly 2,000 on one man. In about three weeks they had turned into brown crusts and had dried up and fallen, leaving brownish spots to last for half a year. There were no deaths, so this was classed as an outbreak of the mild type I prefer a successful vaccination.

It is all nonsense about the old-fashioned severe type of smallpox being extinct. It still exists in various parts of the world, in India, in China, in Mexico, in Russia, and in other places. It has in recent years invaded the United States, from Japan, from Europe, from Africa, and most frequently of all from Mexico. In 1923 Detroit was experiencing an outbreak of mild smallpox. Nobody died. The health department did valiant work but received scant support. People would not be vaccinated The disease dragged on. Then, in January, 1924, a case of virulent smallpox came from Canada. People began to die. They lived sometimes only two or three days. The public became alarmed. They began to back up Doctor Vaughan, the health officer. He vaccinated over 500,000 in a month. The disease was stamped out, but not until 163 persons had been placed in their graves. Virulent smallpox from the same source was carried to Minnesota. In Minneapolis it caused 1,298 cases with 63 deaths. Doctor Chesley traced it to 147 localities, and the average

fatality was 25 per cent. In Washington, D. C., in 1925 there were 59 cases with 20 deaths. During the first quarter of this year there were, in Los Angeles, 812 cases with 136 deaths. Virulent smallpox is still with us. It is as cruel a disease as in the olden times. When there is no smallpox people say, "Why should we worry? Why should we be vaccinated?" That is what the 136 Los Angeles victims said last year. Now it is too late.

How many people are saying the same thing this year? What price will they pay? Intelligence and vaccination, or indifference and smallpox? Every physician and every board of health is ready to vaccinate you now, before it is too late. Have you consulted them as yet? If not, do it now.

Opinion of Attorney General of Tennessee Regarding Authority of Municipal Health Officers Outside of Corporate Limits

Sections 3101 (being section 7 of chapter 98, Laws of 1877) and 3102 (being chapter 28 of the Laws of 1877) of Thompson's Shannon's Code of Tennessee, 1918, read as follows:

SEC. 3101. Every municipality throughout the State having 5,000 inhabitants and over shall organize a properly constituted board of health, which, in addition to their duties as such local boards, shall also make monthly, quarterly, semi-annual, and annual reports to and in accordance with such form and instructions as said State board of health may prescribe, and also shall make special reports whenever required.

SEC 3102. The boards of health established in the various cities and towns of the State shall have the same jurisdiction and authority to do all acts in the territory extending one mile from the corporation line, in any direction, that they have within the corporation, but the jurisdiction herein conferred shall not extend beyond the limits of the county in which any city or town is situated and if two cities lie nearer than two miles of each, the jurisdiction in distance shall be divided between them.

In response to a request by the State commissioner of public health relative to the authority of city and town health officers beyond the limits of their respective municipalities, the attorney general of Tennessee rendered the following opinion:

(1) The provision of section 7, chapter 98, acts of 1877, is valid, and boards of health established in cities and incorporated towns may exercise their authority in the territory extending a mile from the corporate limits. Ordinarily this must be preceded by ordinance establishing a board of health and providing for the territory specified, unless the municipality is operating under some special charter or act of the legislature.

(2) The law provides that there shall be no conflict in authority between city and county health officers. They must act in conjunction and harmoniously in the territory over which each has jurisdiction.

PUBLIC HEALTH ENGINEERING ABSTRACTS

B. coli as Index of Faecal Pollution of Water Supplies. D. A. Bardsley. *J. of Hyg* 1926, vol 25, pp 11–25 (52 refs.). (Abstracted by W. W. C. Topley.) From *Bulletin of Hygiene*, vol. 1, No. 9, September, 1926, pp. 735–736.

This paper contains a careful and adequate review of the criteria which have, from time to time, been advocated for the identification of *B coli*, as a bacterial group, the presence of which in a sample of water affords evidence of excretal contamination. Particular attention is paid to the methyl-red and Voges-Proskauer tests as differentiating between *B coli* of faecal origin and *B. aerogenes*, the normal habitat of which is usually regarded as being grasses, grain, and fertile soil. A useful summary is given in tabular form of the evidence on which this view is based The author then records the results obtained in the examination of 525 samples of water, in which these tests were applied in addition to those usually included in a bacterial analysis. Of these samples 262 contained a coliform bacillus which fermented lactose with the production of acid and gas, failed to liquefy gelatine, and produced a clot in milk. In the case of 15 of these samples, however, all the coliform bacilli submitted to confirmatory tests gave a negative methyl-red reaction and a positive Voges-Proskauer reaction, and should therefore be classed as *B. aerogenes*. It would thus appear that in 5.7 per cent of the cases, in which *B. coli* would have been reported as present by the ordinary tests, the organism actually isolated should not have been regarded as affording evidence of excretal contamination.

(There seems reason for believing that a more adequate differentiation of those bacilli which the sanitary bacteriologist groups together as *B. coli* is a far more serious problem in the Tropics than it is in this country. See report by Pawan, *Bulletin of Hygiene*, v. 1, p. 26.)

Small Sewage Tanks. E. F. Longley, Commonwealth of Australia. Dept. Health Service Pub. (Div. San. Eng.), No. 1, 22 pp. (n. d.) Melbourne (Abstracted by W W. Jameson.) From *Bulletin of Hygiene*, vol. 1, No. 2, February, 1926, pp. 155–156.

This report is really an analysis of the records of 38 small sewage tank installations in Australia. Such installations, while of value for residences and institutions, are not a satisfactory substitute for water-carried sewage systems for communities. Their efficiency may be judged by their freedom from nuisance and objectionable odors and by a long-continued operation without clogging by solids There is insufficient information available regarding the chemical and bacteriological results obtained.

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The majority of the tanks under review contained two or more chambers, but no advantage appears to be gained by dividing tanks into compartments. Such tanks, usually rectangular in shape, should be capable of holding about 24 hours' normal flow or 20 to 100 gallons per head of the population dealt with. Shallow tanks appear to work as satisfactorily as deep tanks. All tanks and drains require periodical cleaning, although one tank is noted as having been in continuous operation for 5 years, 2 for 4 years and 2 for 3 years. In 11 cases where results were not held to be satisfactory, complaints were made either of bad odors or of clogging by solids. Clogging is due usually either to faulty construction or to lack of skilled supervision.

If the disposal of the tank liquor is safe and thorough, sullage waters may with advantage be put through the tanks along with domestic sewage. In any event grease, disinfectants, very hot water, and storm water should be excluded.

In 15 installations oxidizing filters, commonly built of stone, were used for the treatment of tank liquors. These filters may cause nuisance from bad smells and from clogging by solids. They should be ample in capacity, and distribution of the tank liquors must be uniform. Grease is hostile to their good working.

The disposal of the final effluent should be a matter of some concern. If a relatively large volume of water or a highly porous soil is available, no trouble may result, but heavy impervious land is unsuitable for the disposal of these liquids. Care should be taken to avoid the ponding up of putrescible effluents in surface drains. It is not safe to assume that such effluents are pure and innocuous, and where they can not be disposed of without risk of contact with human beings they must be regarded as possible sources of infection.

DEATHS DURING WEEK ENDED NOVEMBER 20, 1926

Summary of information received by telegraph from industrial insurance companies for week ended November 20, 1926, and corresponding week of 1925 (From the Weekly Health Index, November 24, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Nov 20, 1926	Corresponding week, 1925
Policies in force	66, 011, 115	62, 149, 737
Number of death claims	12, 939	11, 965
Death claims per 1,000 policies in force, annual rate	10. 2	10. 0

Deaths from all causes in certain large cities of the United States during the week ended November 20, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the weekly Health Index, November 24, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Nov 20, 1926		Annual death rate per 1 000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Nov 20, 1926 [2]
	Total deaths	Death rate [1]		Week ended Nov 20, 1926	Corresponding week, 1925	
Total (65 cities)	6,930	12 6	12 5	732	730	[3] 59
Akron	43	--------	--------	8	6	86
Albany [4]	33	14 5	15 5	4	5	83
Atlanta	67	--------	--------	6	3	--------
White	36	--------	--------	5	1	--------
Colored	31	(5)	--------	1	2	--------
Baltimore [4]	225	14 5	14.3	15	21	46
White	174	--------	--------	10	15	38
Colored	51	(5)	--------	5	6	80
Birmingham	56	13 8	18.5	12	10	--------
White	28	--------	--------	6	3	--------
Colored	28	(5)	--------	6	7	--------
Boston	217	14 4	15 5	25	35	70
Bridgeport	24	--------	--------	2	5	34
Buffalo	147	14 1	14 3	27	21	113
Cambridge	24	10 3	14.4	0	3	0
Camden	42	16 7	13 4	5	2	84
Canton	15	7 1	12.8	4	7	88
Chicago [4]	646	11 1	11.3	59	63	52
Cincinnati	134	17 0	16 3	12	10	75
Cleveland	186	10 1	10 9	18	21	47
Columbus	69	12 6	14.0	9	6	84
Dallas	61	15 9	15 4	9	13	--------
White	43	--------	--------	5	11	--------
Colored	18	(5)	--------	4	2	--------
Dayton	39	11 5	10 6	5	3	78
Denver	82	15 0	13 7	8	8	--------
Des Moines	31	11 1	10 3	3	2	70
Detroit	259	10 5	12.4	35	53	50
Duluth	29	13 4	12 7	3	1	57
El Paso	30	14 4	11.9	8	4	--------
Erie	19	--------	--------	4	1	82
Fall River [4]	32	12 7	13.3	1	8	16
Flint	24	9 1	5 2	2	4	34
Fort Worth	26	8.5	7.2	4	3	--------
White	24	--------	--------	3	2	--------
Colored	2	(5)	--------	1	1	--------
Grand Rapids	32	10.7	11 6	2	6	29
Houston	56	--------	--------	4	4	--------
White	36	--------	--------	4	4	--------
Colored	20	(5)	--------	0	0	--------
Indianapolis	98	13 9	15 3	12	4	91
White	87	--------	--------	8	--------	70
Colored	11	(5)	--------	4	--------	229
Jersey City	64	10 5	11 4	4	10	30
Kansas City, Kans	39	17 4	11 7	4	2	78
White	31	--------	--------	3	2	67
Colored	8	(5)	--------	1	0	152
Kansas City, Mo	103	14 3	15.5	11	12	--------
Los Angeles	259	--------	--------	15	19	42
Louisville	84	14 1	9 3	5	4	43
White	69	--------	--------	4	3	39
Colored	15	(5)	--------	1	1	70
Lowell	28	--------	--------	3	6	58
Lynn	15	7 5	10.1	6	0	159
Memphis	68	20 0	19 4	6	6	--------
White	28	--------	--------	3	2	--------
Colored	40	(5)	--------	3	4	--------
Milwaukee	115	11 6	9 7	12	10	57
Minneapolis	97	11 7	11.3	6	13	33

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births Cities left blank are not in registration area for births

[3] Data for 63 cities

[4] Deaths for week ended Friday, Nov 19, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta, 31, Baltimore, 15, Birmingham, 39; Dallas, 15, Fort Worth, 14, Houston, 25, Indianapolis, 11, Kansas City, Kans, 14, Louisville, 17, Memphis, 38, Nashville, 30, New Orleans, 26, Norfolk, 38, Richmond, 32, and Washington, D C, 25

Deaths from all causes in certain large cities of the United States during the week ended November 20, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Nov 20, 1926: Total deaths	Week ended Nov 20, 1926: Death rate	Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year: Week ended Nov. 20, 1926	Deaths under 1 year: Corresponding week, 1925	Infant mortality rate, week ended Nov 20, 1926
Nashville [4]	63	24.0	17.6	5	5	
White	34			3	2	
Colored	29	(5)		2	3	
New Bedford	31			3	5	52
New Haven	32	9.2	11.7	6	3	82
New Orleans	149	18.5	17.6	18	17	
White	91			10	10	
Colored	58	(5)		8	7	
New York	1,384	12.2	11.3	135	141	55
Bronx Borough	169	9.8	8.5	15	10	50
Brooklyn Borough	469	10.9	9.8	50	64	51
Manhattan Borough	565	15.7	15.9	61	56	68
Queens Borough	139	9.5	7.2	7	7	32
Richmond Borough	42	15.3	12.4	2	4	35
Newark, N J	93	10.6	10.9	11	11	53
Norfolk	26	7.8	12.0	3	3	61
White	15			1	2	33
Colored	11	(5)		2	1	106
Oklahoma City	31			7	2	
Omaha	57	13.8	12.8	3	2	32
Paterson	36	13.1	9.6	3	0	51
Philadelphia	530	13.8	13.2	52	48	69
Pittsburgh	158	12.9	12.7	24	12	80
Portland, Oreg	61			4	1	40
Providence	58	11.0	10.3	5	8	42
Richmond	55	15.2	16.8	8	5	100
White	33			4	1	78
Colored	22	(5)		4	4	139
Rochester	63	10.2	12.7	6	5	48
St Louis	239	13.0	14.2	26	6	
St. Paul	50	10.5	10.0	5	2	44
Salt Lake City [4]	36	14.1	12.7	1	2	15
San Antonio	57	14.5	13.2	7	12	
San Diego	28	13.3	14.8	0	3	0
San Francisco	118	10.9	11.6	8	10	48
Schenectady	13	7.3	11.2	3	2	80
Seattle	61			2	3	19
Somerville	17	8.9	13.2	2	5	57
Spokane	38	18.2	13.9	4	0	93
Springfield, Mass	36	12.9	16.1	3	5	46
Syracuse	56	15.9	14.3	7	2	89
Tacoma	28	13.8	10.0	3	2	71
Toledo	60	10.6	12.0	10	8	96
Trenton	51	19.8	11.1	9	4	153
Utica	26	13.2	15.4	1	6	23
Washington, D C	142	14.0	15.0	15	10	86
White	91			9	8	75
Colored	51	(5)		6	2	100
Waterbury	18			5	1	118
Wilmington, Del	22	9.3	9.4	2	5	44
Worcester	37	10.0	12.3	4	8	48
Yonkers	24	10.8	11.9	2	1	45
Youngstown	26	8.2	11.4	5	7	63

[4] Deaths for week ended Friday, Nov 19, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta, 31, Baltimore, 15; Birmingham, 39, Dallas, 15, Fort Worth, 14; Houston, 25; Indianapolis, 11, Kansas City, Kans., 14, Louisville, 17, Memphis, 38, Nashville, 30; New Orleans, 26, Norfolk, 38, Richmond, 32; and Washington, D. C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended November 27, 1926

ALABAMA	Cases
Cerebrospinal meningitis	2
Chicken pox	21
Dengue	1
Diphtheria	72
Influenza	66
Malaria	41
Measles	10
Mumps	6
Ophthalmia neonatorum	1
Pellagra	5
Pneumonia	35
Scarlet fever	25
Smallpox	7
Tetanus	2
Trachoma	3
Tuberculosis	63
Typhoid fever	24
Typhus fever	2
Whooping cough	61

ARIZONA	
Chicken pox	2
Diphtheria	4
Measles	10
Scarlet fever	21
Tuberculosis	7
Typhoid fever	1

ARKANSAS	
Chicken pox	22
Diphtheria	7
Hookworm disease	2
Influenza	68
Malaria	22
Measles	3

ARKANSAS—continued	Cases
Mumps	7
Pellagra	2
Scarlet fever	21
Smallpox	1
Tuberculosis	8
Typhoid fever	16
Whooping cough	38

CALIFORNIA	
Cerebrospinal meningitis—Los Angeles	2
Chicken pox	273
Diphtheria	199
Influenza	18
Measles	552
Mumps	188
Poliomyelitis	
Long Beach	1
Los Angeles County	1
Scarlet fever	238
Smallpox	9
Tuberculosis	191
Typhoid fever	10
Whooping cough	52

COLORADO	
Chicken pox	29
Diphtheria	7
German measles	1
Influenza	2
Measles	5
Pneumonia	3
Scarlet fever	68
Smallpox	20
Tuberculosis	14
Typhoid fever	4
Whooping cough	3

CONNECTICUT

	Cases
Chicken pox	111
Diphtheria	25
German measles	1
Influenza	2
Measles	32
Mumps	4
Pneumonia (broncho)	20
Pneumonia (lobar)	25
Scarlet fever	44
Septic sore throat	1
Tuberculosis (pulmonary)	37
Typhoid fever	1
Whooping cough	52

DELAWARE

Chicken pox	3
Pneumonia	2
Scarlet fever	10
Tuberculosis	6
Typhoid fever	1
Whooping cough	2

FLORIDA

Chicken pox	6
Diphtheria	59
Influenza	1
Malaria	3
Measles	5
Mumps	1
Pneumonia	1
Scarlet fever	15
Smallpox	14
Tuberculosis	29
Typhoid fever	5
Typhus fever	1
Whooping cough	8

GEORGIA

Chicken pox	26
Conjunctivitis (acute)	2
Diphtheria	58
Dysentery	2
Influenza	50
Malaria	22
Measles	6
Mumps	7
Pellagra	1
Pneumonia	40
Scarlet fever	12
Septic sore throat	11
Smallpox	16
Tuberculosis	22
Typhoid fever	15
Whooping cough	49

ILLINOIS

Cerebrospinal meningitis—Cook County	3
Chicken pox	467
Diphtheria	129
Influenza	24
Lethargic encephalitis:	
Cook County	1
Fulton County	1
Montgomery County	1
Measles	480

ILLINOIS—continued

	Cases
Mumps	55
Pneumonia	244
Poliomyelitis	
Cook County	2
Peoria County	1
Scarlet fever	234
Smallpox	3
Tuberculosis	276
Typhoid fever	41
Whooping cough	204

INDIANA

Chicken pox	74
Diphtheria	83
Influenza	21
Measles	47
Pneumonia	18
Scarlet fever	117
Smallpox	143
Tuberculosis	38
Typhoid fever	16
Whooping cough	77

IOWA

Cerebrospinal meningitis	1
Chicken pox	72
Diphtheria	32
Measles	9
Mumps	3
Pneumonia	3
Scarlet fever	51
Smallpox	3
Tuberculosis	5
Typhoid fever	1
Whooping cough	4

KANSAS

Cerebrospinal meningitis	
Dearing	1
Topeka	1
Chicken pox	91
Diphtheria	18
Influenza	9
Measles	154
Mumps	4
Pneumonia	31
Poliomyelitis—Lorraine	1
Scarlet fever	91
Smallpox	12
Trachoma	1
Tuberculosis	33
Typhoid fever	6
Whooping cough	55

LOUISIANA

Diphtheria	43
Influenza	12
Malaria	9
Measles	20
Pneumonia	38
Poliomyelitis	1
Scarlet fever	18
Smallpox	9
Tuberculosis	34
Typhoid fever	12

MAINE

	Cases
Chicken pox	82
Diphtheria	1
German measles	2
Influenza	2
Measles	105
Mumps	1
Paratyphoid fever	1
Pneumonia	16
Scarlet fever	47
Tuberculosis	5
Typhoid fever	2
Vincent's angina	1
Whooping cough	23

MARYLAND [1]

	Cases
Cerebrospinal meningitis	1
Chicken pox	110
Diphtheria	49
Dysentery	1
German measles	1
Impetigo contagiosa	4
Influenza	17
Lethargic encephalitis	1
Malaria	1
Measles	21
Mumps	15
Pneumonia (broncho)	37
Pneumonia (lobar)	56
Scarlet fever	43
Septic sore throat	3
Tuberculosis	39
Typhoid fever	22
Whooping cough	57

MASSACHUSETTS

	Cases
Anthrax	1
Cerebrospinal meningitis	1
Chicken pox	289
Conjunctivitis (suppurative)	6
Diphtheria	87
German measles	13
Influenza	9
Lethargic encephalitis	1
Measles	51
Mumps	170
Ophthalmia neonatorum	32
Pneumonia (lobar)	51
Poliomyelitis	3
Scarlet fever	289
Septic sore throat	3
Trachoma	1
Tuberculosis (pulmonary)	81
Tuberculosis (other forms)	29
Typhoid fever	6
Whooping cough	128

MICHIGAN

	Cases
Diphtheria	125
Measles	68
Pneumonia	69
Scarlet fever	204
Smallpox	9
Tuberculosis	29
Typhoid fever	5
Whooping cough	111

[1] Week ended Friday.

MINNESOTA

	Cases
Chicken pox	278
Diphtheria	87
Dysentery	3
Measles	91
Pneumonia	3
Scarlet fever	216
Smallpox	9
Tuberculosis	30
Typhoid fever	3
Whooping cough	15

MISSISSIPPI

	Cases
Diphtheria	30
Scarlet fever	18
Smallpox	6
Typhoid fever	3

MISSOURI

(Exclusive of Kansas City)

	Cases
Chicken pox	40
Diphtheria	43
Epidemic sore throat	3
Influenza	23
Measles	51
Mumps	3
Pneumonia	1
Scarlet fever	135
Smallpox	1
Trachoma	4
Tuberculosis	46
Typhoid fever	14
Whooping cough	20

MONTANA

	Cases
Chicken pox	37
Diphtheria	2
Measles	172
Mumps	2
Poliomyelitis	1
Scarlet fever	113
Smallpox	3
Tuberculosis	12
Typhoid fever	1
Whooping cough	7

NEBRASKA

	Cases
Chicken pox	58
Diphtheria	6
German measles	1
Influenza	1
Measles	3
Mumps	9
Pneumonia	1
Poliomyelitis	1
Scarlet fever	27
Smallpox	17
Typhoid fever	43
Whooping cough	1

NEW JERSEY

	Cases
Cerebrospinal meningitis	1
Chicken pox	173
Diphtheria	140
Influenza	11
Measles	26

NEW JERSEY—continued

	Cases
Pneumonia	85
Poliomyelitis	1
Scarlet fever	105
Trachoma	2
Typhoid fever	16
Whooping cough	146

NEW MEXICO

Chicken pox	5
Diphtheria	1
German measles	2
Measles	3
Mumps	1
Pneumonia	2
Scarlet fever	11
Tuberculosis	24
Typhoid fever	1
Whooping cough	5

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	3
Chicken pox	453
Diphtheria	91
Dysentery	1
German measles	54
Influenza	4
Measles	654
Mumps	118
Pneumonia	178
Poliomyelitis	7
Scarlet fever	133
Septic sore throat	4
Smallpox	3
Tetanus	1
Typhoid fever	32
Vincent's angina	18
Whooping cough	217

NORTH CAROLINA

Cerebrospinal meningitis	1
Chicken pox	59
Diphtheria	122
German measles	1
Malaria	1
Measles	9
Scarlet fever	84
Septic sore throat	2
Smallpox	42
Typhoid fever	6
Whooping cough	243

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Cerebrospinal meningitis—Creek County	1
Chicken pox	12
Diphtheria	66
Influenza	144
Malaria	31
Measles	27
Pneumonia	69
Poliomyelitis	
Canadian County	1
Jefferson County	1

[1] Occurred in previous weeks.

OKLAHOMA—continued

	Cases
Scarlet fever	26
Smallpox—McCurtain County [1]	55
Typhoid fever	37
Whooping cough	20

OREGON

Cerebrospinal meningitis	1
Chicken pox	44
Diphtheria	14
Influenza	17
Measles	19
Mumps	12
Pneumonia [2]	5
Scarlet fever	59
Smallpox	15
Tuberculosis [2]	4
Typhoid fever	3
Whooping cough	8

PENNSYLVANIA

Anthrax—Philadelphia	1
Chicken pox	812
Diphtheria	224
German measles	5
Impetigo contagiosa	14
Lethargic encephalitis,	
Philadelphia	2
Warren	1
Measles	504
Mumps	80
Ophthalmia neonatorum—Philadelphia	4
Pneumonia	52
Poliomyelitis	
Lansdale	1
Philadelphia	1
Scabies	4
Scarlet fever	348
Tuberculosis	114
Typhoid fever	46
Whooping cough	285

RHODE ISLAND

Chicken pox	8
Diphtheria	11
German measles	3
Influenza	1
Mumps	1
Ophthalmia neonatorum	1
Pneumonia	1
Scarlet fever	21
Tuberculosis	6
Whooping cough	7

SOUTH DAKOTA

Chicken pox	16
Influenza	1
Measles	29
Pneumonia	3
Scarlet fever	36
Smallpox	3
Typhoid fever	4
Whooping cough	9

[2] Deaths.

TENNESSEE

	Cases
Chicken pox	17
Diphtheria	86
Dysentery	2
Influenza	51
Lethargic encephalitis—Hamilton County	1
Malaria	7
Measles	16
Ophthalmia neonatorum	2
Pellagra	5
Pneumonia	34
Scarlet fever	58
Smallpox	6
Tuberculosis	12
Typhoid fever	25
Whooping cough	44

TEXAS

	Cases
Chicken pox	4
Diphtheria	62
Influenza	7
Measles	1
Pneumonia	9
Scarlet fever	37
Smallpox	1
Tuberculosis	7
Typhoid fever	2
Whooping cough	9

UTAH

	Cases
Chicken pox	59
Diphtheria	9
German measles	6
Measles	308
Mumps	14
Pneumonia	5
Scarlet fever	19
Smallpox	5
Typhoid fever	2
Whooping cough	2

VERMONT

	Cases
Chicken pox	7
Diphtheria	2
Measles	116
Mumps	18
Scarlet fever	2
Whooping cough	26

VIRGINIA

	Cases
Poliomyelitis—Wythe County	2

WASHINGTON

	Cases
Chicken pox	133
Diphtheria	35
Favus	3
German measles	3
Measles	70
Mumps	28
Poliomyelitis	1

WASHINGTON—continued

	Cases
Scarlet fever	82
Smallpox	20
Tuberculosis	10
Typhoid fever	6
Whooping cough	13

WEST VIRGINIA

	Cases
Chicken pox	60
Diphtheria	75
Influenza	29
Measles	35
Poliomyelitis—Clay	1
Scarlet fever	52
Smallpox	1
Tuberculosis	14
Typhoid fever	28
Whooping cough	43

WISCONSIN

	Cases
Milwaukee	
Chicken pox	80
Diphtheria	21
German measles	2
Lethargic encephalitis	1
Measles	8
Mumps	47
Pneumonia	15
Poliomyelitis	1
Scarlet fever	12
Tuberculosis	10
Whooping cough	53
Scattering	
Cerebrospinal meningitis	2
Chicken pox	259
Diphtheria	53
German measles	4
Influenza	11
Measles	481
Mumps	96
Pneumonia	21
Poliomyelitis	1
Scarlet fever	109
Smallpox	5
Tuberculosis	17
Typhoid fever	4
Whooping cough	126

WYOMING

	Cases
Cerebrospinal meningitis—Hot Springs County	1
Chicken pox	41
Diphtheria	1
Dysentery (amebic)	1
Measles	8
Pneumonia	2
Scarlet fever	22
Smallpox	5
Whooping cough	12

Reports for Week Ended November 20, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	33
Diphtheria	15
Measles	5
Pneumonia	17
Scarlet fever	5
Tuberculosis	24
Typhoid fever	2
Whooping cough	9

NORTH DAKOTA

	Cases
Cerebrospinal meningitis	1
Chicken pox	19
Diphtheria	7
German measles	5
Measles	159
Pneumonia	3
Scarlet fever	52
Smallpox	7

NORTH DAKOTA—continued

	Cases
Tuberculosis	1
Typhoid fever	1

SOUTH CAROLINA

	Cases
Chicken pox	51
Dengue	4
Diphtheria	56
Hookworm disease	25
Influenza	602
Malaria	280
Measles	9
Paratyphoid fever	3
Pellagra	28
Poliomyelitis	2
Scarlet fever	19
Smallpox	6
Tuberculosis	33
Typhoid fever	34
Whooping cough	41

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
October, 1926										
Illinois	8	493	72	10	615	0	24	816	5	386
Kansas	3	134	8	1	256	0	10	266	15	77
Louisiana	2	158	62	217	1	24	2	53	4	111
Maine	1	21	27	0	255	0	3	120	0	29
Maryland	2	137	46	5	23	0	5	166	0	204
Minnesota	0	346	8	1	320		7	949	13	38
Missouri	4	308	44	12	72		7	435	9	221
North Carolina	1	810		47	81		16	388	55	209
Ohio	4	875	20	1	87		23	880	44	296
Oklahoma [1]	4	179	313	521	22	27	6	118	38	45[illegible]
South Dakota	0	37	0		315		5	180	4	18
West Virginia	0	264	72		78		0	352	4	344

[1] Exclusive of Tulsa and Oklahoma City.

October, 1926

	Cases
Actinomycosis	
Illinois	1
Chicken pox:	
Illinois	652
Kansas	197
Louisiana	1
Maine	148
Maryland	114
Minnesota	388
Missouri	124
North Carolina	63
Ohio	751
Oklahoma [1]	22
South Dakota	33
West Virginia	124

[1] Exclusive of Oklahoma City and Tulsa.

	Cases
Conjunctivitis	
Maine	1
Dengue:	
Oklahoma [1]	3
Dysentery	
Illinois	53
Louisiana	10
Maryland	20
North Carolina	1
Ohio	2
Oklahoma [1]	28
German measles.	
Illinois	22
Kansas	2
Maine	4

	Cases
German measles—Continued.	
Maryland	7
North Carolina	23
Ohio	19
Hookworm disease:	
Louisiana	91
Impetigo contagiosa.	
Maine	14
Maryland	2
Lead poisoning.	
Illinois	23
Ohio	14
Leprosy	
Louisiana	1
Lethargic encephalitis.	
Illinois	12
Kansas	2
Louisiana	1
Maryland	2
Minnesota	2
Ohio	1
Mumps	
Illinois	120
Kansas	25
Louisiana	2
Maine	23
Maryland	40
Missouri	16
Ohio	70
Oklahoma [1]	5
South Dakota	1
Ophthalmia neonatorum.	
Illinois	46
Missouri	2
North Carolina	1
Ohio	87
Oklahoma [1]	5
Paratyphoid fever:	
Illinois	4
Kansas	1
Ohio	4
Puerperal septicemia:	
Illinois	5
Ohio	1
Plague (bubonic)	
Louisiana (imported)	2

	Cases
Rabies (in animals)	
Maryland	4
Missouri	5
Scabies	
Oklahoma [1]	1
Septic sore throat	
Illinois	9
Kansas	2
Maine	1
Maryland	2
Missouri	4
North Carolina	11
Ohio	2
Tetanus	
Illinois	1
Kansas	1
Maryland	2
Ohio	3
Oklahoma [1]	2
South Dakota	1
Trachoma	
Illinois	2
Minnesota	1
Missouri	15
Ohio	6
Oklahoma [1]	11
South Dakota	8
Trichinosis	
Illinois	1
Typhus fever	
Maryland	1
Vincent's angina	
Maine	2
Maryland	1
Whooping cough:	
Illinois	773
Kansas	106
Louisiana	9
Maine	171
Maryland	220
Minnesota	119
Missouri	171
North Carolina	617
Ohio	645
Oklahoma [1]	54
South Dakota	76
West Virginia	314

[1] Exclusive of Oklahoma City and Tulsa.

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of October, 1926, to other State health departments by departments of health of certain States

Referred by—	Actinomycosis	Diphtheria	Malaria	Poliomyelitis	Scarlet fever	Trachoma	Tuberculosis	Typhoid fever	Smallpox	Vincent's angina
California							1			
Connecticut		1								
Illinois							5	9		
Minnesota	2		1		1	1	31	7	2	1
New Jersey								1		
New York		2		1	2			6	1	

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended November 13, 1926, 40 States reported 2,568 cases of diphtheria For the week ended November 14, 1925, the same States reported 2,180 cases of this disease One hundred cities, situated in all parts of the country and having an aggregate population of more than 30,300,000, reported 1,328 cases of diphtheria for the week ended November 13, 1926 Last year for the corresponding week they reported 965 cases. The estimated expectancy for these cities was 1,380 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-nine States reported 3,613 cases of measles for the week ended November 13, 1926, and 2,440 cases of this disease for the week ended November 14, 1925. One hundred cities reported 615 cases of measles for the week this year, and 969 cases last year

Poliomyelitis.—The health officers of 40 States reported 52 cases of poliomyelitis for the week ended November 13, 1926. The same States reported 78 cases for the week ended November. 14, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Forty States—this year, 3,592 cases; last year, 2,832 cases; 100 cities—this year, 1,208 cases; last year, 1,044 cases; estimated expectancy, 919 cases.

Smallpox.—For the week ended November 13, 1926, 40 States reported 377 cases of smallpox. Last year for the corresponding week they reported 293 cases. One hundred cities reported smallpox for the week as follows: 1926, 32 cases; 1925, 46 cases; estimated expectancy, 38 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—Six hundred and forty-seven cases of typhoid fever were reported for the week ended November 13, 1926, by 40 States. For the corresponding week of 1925 the same States reported 675 cases of this disease. One hundred cities reported 120 cases of typhoid fever for the week this year and 65 cases for the corresponding week last year. The estimated expectancy for these cities was 104 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 95 cities with a population of more than 29,730,000, as follows: 1926, 682 deaths; 1925, 803 deaths.

City reports for week ended November 13, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded. and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases, reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	17	3	0	0	0	1	0	0
New Hampshire									
Concord	22,546	0	0	0	0	0	0	0	0
Manchester	83,097	0	4	0	0	1	1	0	1
Nashua	29,723	0	1	0	0	0	0	0	1
Vermont									
Barre	10,008	4	0	0	0	0	3	0	0
Burlington	24,089	2	0	0	0	0	0	0	0
Massachusetts									
Boston	779,620	83	61	30	5	0	7	31	13
Fall River	128,993	4	5	2	1	1	0	1	2
Springfield	142,065	9	4	5	0	0	2	1	0
Worcester	190,757	20	7	9	2	0	0	1	4
Rhode Island									
Pawtucket	69,760	9	1	0	0	0	0	0	1
Providence	267,918	0	9	7	0	0	0	0	7
Connecticut.									
Bridgeport	(1)	2	10	3	1	0	0	1	2
Hartford	160,197	6	10	1	2	0	0	0	5
New Haven	178,927	9	4	0	1	0	0	0	4
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	31	26	12	--------	1	0	1	16
New York	5,873,356	119	188	160	45	12	15	87	121
Rochester	316,786	7	12	4	--------	1	3	0	4
Syracuse	182,003	2	13	3	--------	0	12	1	2
New Jersey									
Camden	128,642	6	7	17	0	0	0	0	4
Newark	452,513	22	16	9	8	0	3	13	11
Trenton	132,020	2	6	2	0	1	0	0	5
Pennsylvania.									
Philadelphia	1,979,364	73	81	83	1	5	4	2	45
Pittsburgh	631,563	62	39	36	--------	1	52	0	18
Reading	112,707	28	5	0	--------	0	0	0	4
Scranton	142,266	0	5	5	--------	0	0	0	8
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	14	23	11	0	2	2	7	4
Cleveland	936,485	43	52	101	0	1	5	3	9
Columbus	279,836	15	6	19	0	0	0	0	6
Toledo	287,380	98	17	6	0	0	1	0	4
Indiana									
Fort Wayne	97,846	4	3	11	0	1	0	0	0
Indianapolis	358,819	49	11	38	0	1	1	0	13
South Bend	80,091	7	3	4	0	0	6	0	1
Terre Haute	71,071	7	3	0	0	0	1	0	0
Illinois									
Chicago	2,995,239	122	163	63	7	4	113	20	44
Peoria	81,564	8	2	0	0	1	0	10	6
Springfield	63,923	10	3	4	1	1	6	0	4

[1] No estimate made.

City reports for week ended November 13, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases, reported	Pneumonia, deaths reported
EAST NORTH CENTRAL—continued									
Michigan:									
Detroit	1,245,824	101	71	106	4	3	5	19	31
Flint	130,316	39	14	6	0	0	0	0	2
Grand Rapids	153,698	4	8	0	0	0	1	0	1
Wisconsin:									
Kenosha	50,891	7	3	0	0	0	2	2	2
Madison	46,385	15	1	0	0	0	1	0	0
Milwaukee	509,192	99	32	13	0	1	6	38	8
Racine	67,707	13	2	3	0	0	0	6	0
Superior	39,671	0	1	9	0	0	0	0	2
WEST NORTH CENTRAL									
Minnesota:									
Duluth	110,502	4	5	0	0	0	57	0	3
Minneapolis	425,435	125	31	39	0	1	6	1	7
St. Paul	246,001	34	21	3	0	2	3	0	5
Iowa:									
Davenport	52,469	0	2	1	0	-------	1	1	-------
Des Moines	141,441	0	7	7	0	-------	0	0	-------
Sioux City	76,411	-------	2	-------	-------	-------	-------	-------	-------
Waterloo	36,771	67	0	0	0	-------	1	0	-------
Missouri:									
Kansas City	367,481	36	15	14	2	2	1	5	11
St. Joseph	78,342	0	4	0	0	0	0	0	1
St. Louis	821,543	19	57	40	1	1	1	1	-------
North Dakota:									
Fargo	26,403	23	0	0	0	0	1	4	1
South Dakota:									
Aberdeen	15,036	8	0	0	0	-------	1	0	-------
Sioux Falls	30,127	0	0	0	0	-------	0	0	-------
Nebraska:									
Lincoln	60,941	8	3	0	0	0	0	0	3
Omaha	211,768	6	10	2	0	0	2	4	5
Kansas:									
Topeka	55,411	26	3	0	0	0	1	0	2
Wichita	88,367	9	8	0	0	0	0	0	1
SOUTH ATLANTIC									
Delaware:									
Wilmington	122,049	3	4	3	0	0	1	0	5
Maryland:									
Baltimore	796,296	47	35	35	5	3	2	3	22
Cumberland	33,741	0	1	1	0	0	0	0	0
Frederick	12,035	0	1	1	0	0	0	0	0
District of Columbia:									
Washington	497,906	16	26	68	3	2	0	0	9
Virginia:									
Lynchburg	30,395	2	2	3	0	1	0	1	4
Norfolk	(1)	8	5	8	0	0	1	1	3
Richmond	186,403	2	18	22	0	1	4	1	9
Roanoke	58,208	0	5	3	0	1	0	1	0
West Virginia:									
Charleston	49,019	5	4	1	1	0	0	0	3
Huntington	63,485	0	3	13	0	-------	0	0	-------
Wheeling	56,208	11	4	2	0	0	2	0	1
North Carolina:									
Raleigh	30,371	1	3	5	0	0	0	0	0
Wilmington	37,061	2	1	3	0	0	0	0	2
Winston-Salem	69,031	1	2	10	0	0	0	0	1
South Carolina:									
Charleston	73,125	0	3	2	38	1	0	0	1
Columbia	41,225	0	2	1	0	0	0	0	0
Greenville	27,311	2	2	1	0	0	0	0	0
Georgia:									
Atlanta	(1)	0	10	31	19	0	3	1	9
Brunswick	16,809	0	0	1	0	0	0	1	0
Savannah	93,134	1	4	2	11	0	0	0	3

[1] No estimate made.

City reports for week ended November 13, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—con									
Florida									
Miami	69,754	0	--------	3	1	0	0	0	2
St Petersburg	26,847	--------	0	--------	--------	0	--------	--------	1
Tampa	94,743	2	1	5	0	0	0	0	2
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	1	3	5	0	0	2	0	2
Louisville	305,935	5	13	7	0	0	0	1	8
Tennessee									
Memphis	174,533	7	15	11	0	0	0	0	6
Nashville	136,220	1	5	16	0	2	0	0	7
Alabama									
Birmingham	205,670	2	7	7	4	2	0	2	8
Mobile	65,955	0	2	1	0	1	0	0	1
Montgomery	46,481	1	2	4	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	1	3	0	--------	0	0	--------
Little Rock	74,216	0	4	0	0	--------	1	0	1
Louisiana									
New Orleans	414,493	2	13	16	14	12	2	0	12
Shreveport	57,857	0	1	8	0	0	0	0	0
Oklahoma									
Oklahoma City	(1)	0	5	2	0	0	0	0	1
Texas									
Dallas	194,450	0	14	43	3	2	3	1	2
Galveston	48,375	0	1	0	0	0	0	0	0
Houston	164,954	0	5	17	0	1	0	0	8
San Antonio	198,069	0	4	1	0	0	0	0	2
MOUNTAIN									
Montana									
Billings	17,971	7	0	0	0	0	36	0	0
Great Falls	29,883	7	1	0	0	0	2	0	3
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	10	0	0	0	0	0	0	1
Idaho									
Boise	23,042	4	0	0	0	0	0	0	0
Colorado									
Denver	280,911	5	15	13	--------	1	11	2	4
Pueblo	43,787	3	5	0	0	2	0	0	0
New Mexico									
Albuquerque	21,000	1	0	0	0	0	0	0	1
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	1
Utah									
Salt Lake City	130,948	18	4	7	0	0	119	1	9
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	31	6	9	0	--------	1	13	--------
Spokane	108,897	25	4	0	0	--------	35	0	--------
Tacoma	104,455	11	3	7	0	0	0	0	4
Oregon									
Portland	282,383	13	11	8	0	0	8	0	11
California									
Los Angeles	(1)	24	42	57	9	2	4	6	19
Sacramento	72,260	3	3	1	0	1	21	11	2
San Francisco	557,530	22	17	12	0	1	43	22	3

[1] No estimate made

City reports for week ended November 13, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	1	0	0	0	0	0	0	1	0	7	21
New Hampshire											
Concord	1	0	0	0	0	0	0	0	0	0	15
Manchester	1	0	0	0	0	2	0	0	0	0	21
Nashua	1	1	0	0	0	0	0	0	0	0	--------
Vermont											
Barre	0	0	0	0	0	0	0	0	0	2	0
Burlington	1	0	0	0	0	1	0	0	0	3	3
Massachusetts											
Boston [1]	37	79	0	0	0	12	2	3	1	23	203
Fall River	2	1	0	0	0	3	1	0	0	13	--------
Springfield	6	2	0	0	0	1	0	0	0	2	28
Worcester	9	28	0	0	0	0	0	0	0	0	43
Rhode Island											
Pawtucket	1	2	0	0	0	1	0	0	0	0	13
Providence	5	12	0	0	0	3	1	0	0	2	60
Connecticut											
Bridgeport	7	13	0	0	0	2	0	0	0	3	22
Hartford	6	10	0	0	0	0	0	0	0	6	--------
New Haven	6	2	0	0	0	1	1	0	0	1	45
MIDDLE ATLANTIC											
New York											
Buffalo	17	11	0	0	0	10	2	5	0	17	136
New York	95	134	0	0	0	[2] 107	20	24	4	128	1,360
Rochester	7	9	0	0	0	2	1	1	0	3	62
Syracuse	11	5	0	0	0	1	1	0	0	3	41
New Jersey											
Camden	3	10	0	0	0	1	0	1	0	0	21
Newark	13	14	0	0	0	5	2	0	0	22	109
Trenton	2	1	0	0	0	2	1	3	1	5	47
Pennsylvania											
Philadelphia	61	50	0	0	0	40	6	9	1	37	470
Pittsburgh	38	16	0	0	0	7	1	0	2	10	151
Reading	2	1	0	0	0	0	0	0	0	8	31
Scranton	2	11	0	0	0	6	0	0	0	5	51
EAST NORTH CENTRAL											
Ohio											
Cincinnati	13	6	0	0	0	10	1	1	0	3	120
Cleveland	25	16	0	0	0	15	3	2	0	25	189
Columbus	9	9	0	4	0	6	1	0	0	2	90
Toledo	11	7	0	0	0	9	1	3	0	22	66
Indiana											
Fort Wayne	1	1	0	0	0	0	1	0	0	1	28
Indianapolis	10	24	2	8	0	5	1	0	0	14	99
South Bend	3	0	0	0	0	0	0	0	0	0	--------
Terre Haute	4	7	1	0	0	0	0	0	0	5	8
Illinois											
Chicago	104	87	1	0	0	25	6	3	0	54	595
Peoria	7	3	0	0	0	2	0	0	0	0	28
Springfield	2	0	0	0	0	0	0	1	0	0	29
Michigan											
Detroit	65	76	2	2	0	17	3	4	1	37	264
Flint	9	13	1	0	0	2	1	0	0	2	30
Grand Rapids	8	11	1	0	0	0	1	1	0	0	28
Wisconsin											
Kenosha	1	1	1	0	0	0	0	0	0	13	5
Madison	1	6	0	0	0	1	0	0	0	11	4
Milwaukee	34	13	2	0	0	4	0	2	0	60	109
Racine	5	2	1	0	0	0	1	0	0	10	7
Superior	2	1	0	0	0	0	0	0	0	0	8

[1] In the Public Health Reports of Oct. 29, 1926, p. 2503, was published a report of 10 deaths from typhoid fever at Boston, Mass., during the week ended Oct. 9, 1926. The health commissioner of Boston advises that no deaths from typhoid fever occurred during that week.

[2] Pulmonary tuberculosis only.

City reports for week ended November 13, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST NORTH CENTRAL											
Minnesota											
Duluth	5	12	0	0	0	0	0	0	0	0	18
Minneapolis	39	66	1	0	0	5	1	1	0	0	85
St Paul	15	23	6	1	0	3	1	1	0	10	52
Iowa											
Davenport	1	2	0	0	-------	-------	0	0	-------	0	-------
Des Moines	11	3	1	0	-------	-------	0	0	-------	1	-------
Sioux City	3	-------	0	-------	-------	-------	0	-------	-------	-------	-------
Waterloo	3	0	0	0	-------	-------	0	0	-------	1	-------
Missouri											
Kansas City	12	4	0	1	0	3	1	1	0	3	103
St Joseph	3	0	0	0	0	2	0	0	0	0	18
St Louis	35	40	0	0	0	7	3	3	2	14	187
North Dakota											
Fargo	2	5	0	0	0	0	0	1	0	1	7
South Dakota											
Aberdeen	0	11	0	0	-------	-------	0	0	-------	1	-------
Sioux Falls	2	3	0	0	-------	-------	0	0	-------	0	-------
Nebraska											
Lincoln	1	4	0	0	0	0	0	1	0	4	13
Omaha	4	10	3	0	0	2	1	0	0	2	47
Kansas											
Topeka	3	2	0	3	0	0	0	0	0	2	13
Wichita	3	8	0	0	0	0	1	1	0	2	33
SOUTH ATLANTIC											
Delaware											
Wilmington	3	10	0	0	0	4	1	0	0	7	39
Maryland											
Baltimore	15	20	0	0	0	14	4	4	0	44	241
Cumberland	0	0	0	0	0	0	1	0	1	1	10
Frederick	0	0	0	0	0	0	0	1	0	8	3
District of Columbia											
Washington	17	20	0	0	0	11	3	3	1	3	140
Virginia											
Lynchburg	1	3	0	0	0	0	0	1	0	2	17
Norfolk	2	8	0	0	0	1	0	1	1	2	-------
Richmond	9	4	0	0	0	5	1	0	0	2	58
Roanoke	3	8	0	0	0	1	0	0	0	2	20
West Virginia											
Charleston	2	1	0	0	0	1	0	0	1	0	31
Huntington	1	6	0	0	-------	-------	0	0	-------	0	-------
Wheeling	3	0	0	0	0	1	1	0	0	0	18
North Carolina.											
Raleigh	2	3	0	0	0	0	0	0	0	7	11
Wilmington	1	1	0	1	0	1	0	0	0	3	16
Winston-Salem	2	5	0	0	0	2	0	0	0	2	25
South Carolina.											
Charleston	1	0	0	0	0	1	1	2	0	0	19
Columbia	1	1	0	0	0	0	0	1	0	0	-------
Greenville	1	2	0	0	0	0	0	1	0	0	4
Georgia											
Atlanta	6	7	1	0	0	8	1	4	0	0	83
Brunswick	0	0	0	0	0	0	0	0	0	0	2
Savannah	0	1	0	0	0	4	0	0	0	0	28
Florida											
Miami	-------	1	-------	0	0	1	-------	1	0	0	25
St Petersburg	0	-------	0	-------	0	0	1	-------	0	-------	12
Tampa	1	1	0	0	0	2	0	1	1	0	13
EAST SOUTH CENTRAL											
Kentucky											
Covington	2	1	0	0	0	1	0	0	0	0	19
Louisville	4	21	0	1	0	6	2	0	0	2	77
Tennessee											
Memphis	4	15	0	1	0	2	2	7	0	3	59
Nashville	4	15	0	0	0	0	2	3	1	3	37
Alabama:											
Birmingham	5	4	1	0	0	5	2	0	0	3	61
Mobile	1	0	0	0	0	2	1	0	1	0	23
Montgomery	0	1	0	0	0	0	1	0	0	0	6

City reports for week ended November 13, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	0	0	0			1	1		0	
Little Rock	2	1	0	0	0	3	1	1	0	5	
Louisiana:											
New Orleans	5	10	0	0	0	13	3	1	0	0	166
Shreveport	1	3	0	1	0	1	1	0	0	0	20
Oklahoma:											
Oklahoma City	3	2	0	1	0	1	1	1	0	0	15
Texas:											
Dallas	4	10	0	6	0	2	1	2	0	0	47
Galveston	0	1	0	0	0	1	0	0	0	0	12
Houston	2	8	0	0	0	9	0	0	0	0	71
San Antonio	1	0	1	0	0	4	0	3	1	0	48
MOUNTAIN											
Montana:											
Billings	1	0	0	0	0	1	0	0	0	0	6
Great Falls	2	2	1	0	0	0	0	0	0	0	5
Helena	0	0	0	0	0	1	0	0	0	0	3
Missoula	1	15	0	0	0	0	0	0	0	0	8
Idaho:											
Boise	0	0	0	0	0	0	0	0	0	0	5
Colorado:											
Denver	9	53	3	1	0	7	1	1	0	0	62
Pueblo	1	0	0	0	0	0	1	1	0	0	11
New Mexico:											
Albuquerque	1	1	0	0	0	4	0	0	0	0	9
Arizona:											
Phoenix	2	0	0	0	0	11	0	1	0	0	26
Utah:											
Salt Lake City	3	3	1	0	0	1	1	1	0	3	39
Nevada:											
Reno	1	2	0	0	0	0	0	0	0	0	3
PACIFIC											
Washington:											
Seattle	8	8	3	0			1	5		1	
Spokane	7	11	2	1			1	0		3	
Tacoma	2	2	1	1	0	0	0	0	0	0	30
Oregon:											
Portland	7	22	3	0	0	1	1	1	0	0	76
California:											
Los Angeles	18	60	2	0	0	22	2	3	0	2	250
Sacramento	2	3	1	0	0	2	0	0	0	1	27
San Francisco	9	20	0	0	0	18	1	3	2	8	136

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis (infantile paralysis): Cases	Poliomyelitis (infantile paralysis): Deaths
NEW ENGLAND									
Massachusetts:									
Boston	0	0	0	0	0	0	1	2	0
Rhode Island:									
Providence	0	1	0	0	0	0	1	0	0
MIDDLE ATLANTIC									
New York:									
Buffalo	1	1	0	0	0	0	0	0	0
New York	2	0	4	4	0	0	6	1	1
New Jersey:									
Newark [1]	0	0	0	0	0	0	0	1	0
Pennsylvania:									
Philadelphia	0	0	0	0	0	0	0	1	0

[1] Rabies (human); 1 case at Newark, N. J.

City reports for week ended November 13, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio									
Cleveland	1	0	0	0	0	0	0	1	0
Toledo	0	0	0	0	0	0	0	2	0
Michigan									
Detroit	0	0	1	0	0	0	1	0	0
Grand Rapids	0	0	0	0	0	0	0	2	0
WEST NORTH CENTRAL									
Nebraska									
Omaha	0	0	0	0	0	0	0	1	1
SOUTH ATLANTIC									
Maryland									
Baltimore	1	0	2	1	0	0	1	0	0
Virginia									
Lynchburg	0	0	0	0	0	0	0	1	0
North Carolina									
Winston-Salem	1	1	0	0	0	0	0	0	0
South Carolina									
Charleston [1]	0	0	0	0	1	0	0	0	0
Georgia									
Atlanta	0	0	0	0	0	0	0	3	0
Florida									
St Petersburg	0	1	0	0	0	0	0	0	0
EAST SOUTH CENTRAL									
Kentucky									
Louisville	1	0	0	0	0	0	0	0	0
Tennessee									
Memphis	0	1	0	0	0	0	0	0	0
Alabama									
Birmingham	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	2	0	0	0
Louisiana									
New Orleans	1	0	0	0	0	0	0	0	0
Texas									
Houston	0	0	0	0	1	1	0	0	0
San Antonio	1	0	0	0	0	1	0	0	0

[1] Dengue, 1 case at Charleston, S C

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended November 13, 1926, compared with those for a like period ended November 14, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 95 cities reporting deaths had more than 29,200,000 estimated population in1925 and more than 29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, October 10 to November 13, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Oct. 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov. 13, 1926
101 cities	170	165	[2] 163	203	[3] 176	213	161	[3] 224	169	[4] 228
New England	120	85	[5] 94	85	132	100	93	118	122	135
Middle Atlantic	129	109	[illegible]	122	148	138	125	142	140	162
East North Central	166	219	180	261	186	241	178	276	185	264
West North Central	[illegible]	209	276	240	278	264	264	252	235	[4] 216
South Atlantic	209	218	[6] 272	302	213	357	198	319	236	391
East South Central	89	270	100	400	89	584	126	425	63	265
West South Central	88	213	101	280	251	331	189	254	203	379
Mountain	157	164	361	255	[3] 170	155	277	[3] 223	240	182
Pacific	105	175	135	191	149	205	141	288	138	232

MEASLES CASE RATES

	Oct. 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov. 13, 1926
101 cities	67	43	[2] 91	49	[3] 102	64	149	[3] 81	169	[4] 106
New England	451	26	[5] 578	26	582	24	822	66	903	31
Middle Atlantic	65	9	87	12	110	13	159	16	170	44
East North Central	24	36	45	47	54	77	70	80	84	100
West North Central	10	44	10	42	12	85	14	151	10	[4] 152
South Atlantic	52	21	[6] 37	26	56	9	144	21	217	24
East South Central	5	0	37	21	16	21	16	26	16	10
West South Central	0	13	13	4	4	0	9	9	9	26
Mountain	18	237	28	337	[3] 19	391	37	[3] 800	46	1,529
Pacific	28	291	11	275	14	342	17	315	19	260

SCARLET FEVER CASE RATES

	Oct. 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov. 13, 1926
101 cities	121	130	[2] 127	152	[3] 155	169	163	[3] 189	182	[4] 208
New England	127	144	[5] 125	131	194	216	261	265	237	352
Middle Atlantic	75	62	96	51	106	92	110	94	142	125
East North Central	146	132	135	155	185	157	139	189	180	185
West North Central	256	318	284	373	292	354	358	415	354	[4] 354
South Atlantic	129	126	[6] 126	163	180	133	173	199	161	178
East South Central	142	145	121	223	74	332	100	249	168	296
West South Central	53	86	40	95	40	112	97	112	114	142
Mountain	16	264	111	446	[3] 189	364	166	[3] 595	176	701
Pacific	135	205	127	235	141	237	155	205	196	280

SMALLPOX CASE RATES

	Oct. 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov. 13, 1926
101 cities	8	4	[2] 7	3	[3] 10	3	9	[3] 3	8	[4] 5
New England	0	0	[5] 7	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	8	3	4	3	16	1	12	6	13	10
West North Central	0	6	4	0	25	2	10	2	4	[4] 10
South Atlantic	6	4	[6] 0	9	6	6	12	0	6	2
East South Central	42	0	5	10	5	5	26	10	32	10
West South Central	0	4	0	0	0	4	0	9	0	30
Mountain	28	9	9	0	[3] 9	9	18	[3] 0	18	9
Pacific	55	32	75	16	44	22	47	3	41	5

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Barre, Vt., and Winston-Salem, N C, not included.
[3] Helena, Mont, not included
[4] Sioux City, Iowa, not included.
[5] Barre, Vt., not included.
[6] Winston-Salem, N C., not included

Summary of weekly reports from cities, October 10 to November 13, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov. 13, 1926
101 cities	35	32	[2] 32	26	[3] 25	27	27	[3] 24	11	[4] 21
New England	24	57	[5] 14	19	17	12	22	17	2	9
Middle Atlantic	28	26	25	20	21	14	12	12	8	21
East North Central	31	15	9	13	15	17	18	13	9	10
West North Central	20	14	33	22	18	24	31	26	16	[4] 17
South Atlantic	65	66	[6] 73	77	25	75	60	45	10	36
East South Central	121	140	147	99	100	140	168	104	42	52
West South Central	44	26	79	22	79	39	48	22	57	34
Mountain	46	46	65	27	[3] 85	46	37	[3] 93	9	27
Pacific	19	16	30	13	19	19	8	46	3	30

INFLUENZA DEATH RATES

	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov. 13, 1926
95 cities	6	6	[2] 8	7	[3] 10	11	13	[3] 11	11	14
New England	0	5	[5] 2	7	12	7	5	12	7	2
Middle Atlantic	5	4	8	8	10	8	14	9	14	10
East North Central	8	2	9	5	7	14	11	6	10	10
West North Central	6	11	6	2	11	2	6	6	13	13
South Atlantic	2	8	[6] 2	8	6	21	17	15	2	17
East South Central	16	16	5	10	26	10	37	21	26	26
West South Central	10	14	19	14	34	24	15	43	29	71
Mountain	0	27	37	27	[3] 9	9	9	[3] 19	0	27
Pacific	11	11	4	0	4	7	15	7	4	14

PNEUMONIA DEATH RATES

	Oct 17, 1925	Oct 16, 1926	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov. 13, 1926
95 cities	90	77	[2] 88	85	[3] 117	96	133	[3] 101	132	106
New England	93	76	[5] 87	83	108	99	134	99	120	90
Middle Atlantic	94	88	89	104	136	101	143	113	143	114
East North Central	89	63	79	60	114	86	119	84	131	85
West North Central	58	53	60	49	97	63	86	84	81	76
South Atlantic	121	88	[6] 116	113	129	107	194	120	152	139
East South Central	95	52	121	99	105	135	152	99	163	166
West South Central	53	104	111	57	116	80	150	118	102	113
Mountain	120	118	111	127	[3] 76	182	102	[3] 167	176	155
Pacific	80	82	76	99	47	89	91	50	109	99

[2] Barre, Vt, and Winston-Salem, N C, not included.
[3] Helena, Mont, not included.
[4] Sioux City, Iowa, not included
[5] Barre, Vt, not included
[6] Winston-Salem, N. C, not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29, 900, 058	30, 427, 598	29, 221, 531	29, 733, 613
New England	12	12	2, 176, 124	2, 206, 124	2, 176, 124	2, 206, 124
Middle Atlantic	10	10	10, 346, 970	10, 476, 970	10, 346, 970	10, 476, 970
East North Central	16	16	7, 481, 656	7, 655, 436	7, 481, 656	7, 655, 436
West North Central	12	10	2, 550, 024	2, 589, 131	2, 431, 253	2, 468, 448
South Atlantic	21	21	2, 716, 070	2, 776, 070	2, 716, 070	2, 776, 070
East South Central	7	7	993, 103	1, 004, 953	993, 103	1, 004, 953
West South Central	8	6	1, 184, 057	1, 212, 057	1, 078, 198	1, 103, 096
Mountain	9	9	563, 912	572, 773	563, 912	572, 773
Pacific	6	4	1, 888, 142	1, 934, 084	1, 434, 245	1, 469, 144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended November 6, 1926.—The following report for the week ended November 6, 1926, was transmitted by the eastern bureau of the secretariat of the health section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Madagascar Tamatave	1	----	0	0	0	0
Mauritius Port Louis	2	1	0	0	0	0
Union of South Africa						
Durban	0	0	0	0	7	----
British India						
Calcutta	----	0	----	16	2	2
Bombay	----	0	----	0	5	3
Rangoon	----	4	----	1	0	0
Ceylon Colombo	1	1	1	0	0	0
Straits Settlements						
Singapore	0	0	0	0	1	0
Dutch East Indies						
Cheribon	0	0	0	0	0	0
Surabaya	4	4	0	0	0	0
Siam Bangkok	0	0	1	0	3	1
French Indo-China						
Saigon and Cholon	0	0	1	1	0	0
Turane	0	0	5	4	0	0
China:						
Amoy	0	0	1	----	0	0
Shanghai	0	0	1	0	0	0
U S S R Vladivostok	0	0	0	0	2	----

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week

ASIA

Arabia.—Aden, Jeddah, Kamaran Perim

Iraq.—Basrah

Persia.—Mohammerah, Bender Abbas, Bushire

British India.—Madras, Karachi Chittagong, Cochin, Vizagapatam, Negapatam, Tuticorin

Federated Malay States.—Port Swettenham

Straits Settlements.—Penang

Dutch East Indies.—Samarang, Batavia, Sabang, Makassar, Banjermasin, Palembang, Menado, Pontianak, Belawan-Deli, Padang, Samarinda, Tarakan.

Sarawak.—Kuching

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao

Portuguese Timor.—Dilly.

French Indo-China.—Haiphong.

China.—Hongkong.

Formosa.—Keelung.

Japan.—Yokohama, Osaka, Nagasaki, Kobe, Niigata, Tsuruga, Hakodate, Shimonoseki, Moji.

Korea.—Chemulpo, Fusan.

Manchuria.—Mukden, Changchun, Harbin, Antung.

Kwantung.—Port Arthur, Dairen.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.

New Guinea.—Port Moresby

New Britain Mandated Territory.—Rabaul

New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin

New Caledonia.—Noumea.

Fiji.—Suva

Hawaii.—Honolulu

Society Islands.—Papeete.

AFRICA

Egypt.—Port Said, Suez, Alexandria.

Anglo-Egyptian Sudan.—Port Sudan, Suakin.

Eritrea.—Massaua.

French Somaliland.—Jibuti

British Somaliland.—Berbera.

Italian Somaliland.—Mogadiscio.

Kenya.—Mombasa

Zanzibar.—Zanzibar.

Tanganyika.—Dar-es-Salaam.

Seychelles.—Victoria

Madagascar.—Majunga.

Portuguese East Africa.—Mozambique, Beira, Lourenco Marques

Union of South Africa.—East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

Dutch East Indies.—Balikpapan.

Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.

CANADA

Communicable diseases—Week ended November 6, 1926—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the week ended November 6, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Influenza	5							5
Lethargic encephalitis				2	2			4
Poliomyelitis				2				2
Smallpox		1		10	5	10	11	37
Typhoid fever	6	3	9	17	1	10	1	47

ECUADOR

Plague—Guayaquil—October 1-15, 1926.—During the 15-day period ended October 15, 1926, one case of plague was reported at Guayaquil, Ecuador.

Plague-infected rats—During the same period of 7,730 rats taken, 6 rats were found plague-infected.

GREECE

Plague—Patras—October 27-29, 1926.—Plague has been reported at Patras, Greece, as follows: October 27, 1926, one case; October 29, one death.

LATVIA

Communicable diseases—August, 1926.—During the month of August, 1926, communicable diseases were reported in the Republic of Latvia as follows:

Disease	Cases	Disease	Cases
Anthrax	2	Paratyphoid fever	3
Cerebrospinal meningitis	3	Puerperal fever	3
Diphtheria	35	Rabies	1
Dysentery	76	Scarlet fever	147
Erysipelas	24	Tetanus	2
Lethargic encephalitis	2	Trachoma	21
Malaria	1	Typhoid fever	135
Measles	10	Typhus fever	2
Mumps	3	Whooping cough	51

MADAGASCAR

Plague—September 1-15, 1926.—During the period September 1 to 15, 1926, 87 cases of plague with 78 deaths were reported in the Island of Madagascar. The occurrence was distributed by provinces as follows: *Itasy*—Cases, 6; deaths, 6. *Majunga*—Cases, 42; deaths, 33. *Moramanga*—Cases, 8; deaths, 8. *Tamatave*—Cases, 2; deaths, 2. *Tananarive*—Cases, 29; deaths, 29. The distribution according

to type was: Bubonic, 58; pneumonic, 17; septicemic, 12 cases. The urban occurrence reported was, in Tananarive town (interior), 4 cases; 4 deaths. Pneumonic, 3; septicemic, 1.

MEXICO

Smallpox erroneously reported at Tampico—June 1-10, 1926.—Later information shows that the report of two deaths from smallpox at Tampico, Mexico, for the period June 1-10, 1926, published in the Public Health Reports, July 2, 1926, page 1402, and in subsequent issues, was erroneous.

VIRGIN ISLANDS

Communicable diseases—October, 1926.—Communicable diseases were reported in the Virgin Islands of the United States during the month of October, 1926, as follows:

Island and disease	Cases	Remarks
St Thomas and St John		
Chancroid	2	1 imported.
Gonorrhea	9	1 imported
Malaria	1	Imported. Malignant subtertian.
Schistosomiasis	1	Imported. Mansoni
Syphilis	10	Primary, 1, secondary, 7.
Trachoma	1	
Tuberculosis	1	Chronic pulmonary
Typhoid fever	1	Imported
Uncinariasis	3	Necator americanus 1 imported.
St. Croix		
Dysentery	1	Entamebic.
Filariasis	10	Bancrofti
Gonorrhea	1	
Pellagra	5	
Tuberculosis	2	Chronic pulmonary

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended December 3, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Amoy	Oct 10-23	18		
Changsha	Oct 10-16	1		
Shanghai	Oct. 3-9	2	10	Cases, foreign, deaths, foreign and native, in international concessions.
Swatow	Oct 10-16	7		
India				Sept 26-Oct 2, 1926 Cases, 864, deaths, 477 Corresponding period, year 1925. Cases, 1,318; deaths, 730
Bombay	Oct 10-16	1	1	
Philippine Islands:				
Manila				Dec. 27, 1925-Oct 2, 1926 Cases, 26; deaths, 6
Siam				Oct. 3-9, 1926 Cases, 26, deaths, 17. Apr 1-Oct. 9, 1926: Cases, 7,669, deaths, 5,040
Bangkok	Oct. 3-9	2		District.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended December 3, 1926—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Ecuador				
Guayaquil	Oct 1-15	1		Rats taken, 7,730, rats, found plague infected, 6
Do	Oct 16-31	2		Rats taken, 12,500, found infected, 20
Greece				
Patras	Oct 27-29	1	1	
India				Sept 26-Oct 2, 1926 Cases, 1,732, deaths 1,008 Corresponding period, year 1925: Cases, 983, deaths, 692
Madras Presidency	Sept 26-Oct 2	111	50	
Java				
Batavia	Oct 10-16	9	9	Province
East Java and Madura	do		1	
Madagascar				Sept 1-15, 1926 Cases, 87, deaths, 78
Province—				
Itasy	Sept 1-15	6	6	Bubonic, cases, 5, pneumonic, 1
Majunga	do	42	33	Bubonic
Moramanga	do	8	8	Bubonic, 1, septicemic, 7.
Tamatave	do	2	2	Bubonic
Tananarive	do	29	29	Bubonic, 8, pneumonic, 16, septicemic, 5
Tananarive Town	do	4	4	Pneumonic, 3, septicemic, 1.

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Canada				
Alberta				Oct 31-Nov 6, 1926 Cases, 11
Calgary	Oct 31-Nov 13	12		Oct 17-23, 1926 Cases, 6. Out of date
Manitoba				Oct 31-Nov 6, 1926 Cases, 5.
New Brunswick				Oct 31-Nov 6, 1926. 1 case
Ontario				Oct 31-Nov 6, 1926 Cases, 10.
Toronto	Oct. 31-Nov. 13	19		
Saskatchewan				Oct. 31-Nov 6, 1926 Cases, 10.
China				
Chungking	Oct. 3-9			Present.
Shanghai	do	1		Foreign
Swatow	Oct 16-23			Sporadic
France				
Paris	Oct 11-20	11	3	
Great Britain				
England and Wales				Oct 17-26, 1926 Cases, 120
London	Oct 17-23	1		
India				Sept 26-Oct 2, 1926: Cases, 345; deaths, 134 Corresponding week, 1925—Cases, 1,155, deaths, 247
Bombay	Oct 10-16	4	3	
Madras	Oct 17-23	2	1	
Java.				
Batavia	Oct 10-16	1		Province.
East Java and Madura	Sept 26-Oct 2	18	2	
Mexico				
San Luis Potosi	Nov 7-13		2	
Portugal				
Lisbon	Oct 23-Nov. 6	9	1	

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
China				
Antung	Oct 11-24	5		
Latvia	Aug 1-31	2		
Palestine				Oct 19-25, 1926 Cases, 2. August, 1926 Cases, 10
Jaffa	Oct 19-25	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 26, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18–May 29, 1926 Cases, 31, deaths, 29
China.				
Amoy	Aug 8–Oct 9	253		Stated to be present in epidemic form
Antung	Aug 1–31	500		
Canton	June 1–30	38	14	
Do	July 15–31	54	28	
Changsha	Oct 3–9	1		
Foochow	Aug 15–Oct 2		1	In foreign population
Kulangsu	Sept 12–18		2	
Manchuria—				
Changchun	Aug 1–31	320		
Dairen	do	10	1	
Harbin	Aug 5–Sept 12	289	83	
Newchwang	Aug 1–31	167		
Nanking	July 25–Oct 2			Present
Shanghai	Reported July 20	35	8	
Do	July 25–Oct 2	38	409	Cases, foreign, deaths, native and foreign
Swatow	July 11–Oct 9	43	63	
Tsingtao	July 11–Aug 30	4	4	Japanese settlements, 10 deaths; Chinese, 30 to 40 deaths daily; estimated.
Chosen				
North Heian Province	Sept 3–16	70	30	Deaths estimated
Shingishu	Sept 13	19		Including places in vicinity.
French Settlements in India	Mar 7–June 26	31	30	
Do	June 27–Aug 28	94	83	
India				Apr 25–June 26, 1926 Cases, 18,526, deaths, 11,531 June 27–Sept 25, 1926 Cases, 26,403, deaths, 16,809
Bombay	May 30–June 5	1	1	
Do	July 18–Aug 28	3	3	
Calcutta	Apr 4–May 29	478	418	
Do	June 13–26	73	69	
Do	June 27–Sept 25	304	272	
Madras	May 16–June 5	2	1	
Do	Aug. 1–Sept 25	7	6	
Rangoon	May 9–June 26	67	44	
Do	June 27–Sept. 4	31	29	
Indo-China				
Saigon	May 2–15	52	48	
Do	May 22–June 26	42	32	
Do	June 27–Aug 14	31	17	
Japan				To Sept 10, 1926 Cases, 35.
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama.
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Taihoku	Sept. 1–10	2		
Wakayama	To Sept 10	2		
Taiwan Island	Sept 21–Oct. 10	11		
Philippine Islands.				
Manila	May 18–24	2	2	
Do	June 27–Oct 2	14	3	
Provinces—				
Albay	Apr 18–24	1	1	
Davao	May 23–29	1		
Mindoro	Feb 21–Mar 6	3	3	
Pampanga	July 25–31	1	1	
Rizal	July 18–24	1		
Romblon	Dec 14–31	42	43	
Do	Jan. 2–Mar 27	41	35	
Siam				Apr 1–Sept 25, 1926 Cases, 7,643, deaths, 5,023
Bangkok	May 2–June 12	1,325	736	
Do	June 20–26	56	26	
Do	June 27–Sept 25	94	68	
Straits Settlements:				
Singapore	July 4–17	2	1	
On vessel:				
Steamship Macedonia	Aug 5	7		At Yokohama, Japan Vessel sailed from Singapore July 18, 1926

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 26, 1926—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported
Do	July 1-20	1		
Do	Sept 23	1		
Bona	Aug 14	1		
Oran	Sept 21-Oct 10	9	4	
Philippeville	Sept 7	1		
Azores				
Fayal Island—				
Horta	Aug 2-29	2	2	
St Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	
Brazil				
Paranagua	Oct 8			Present
British East Africa:				
Kisumu	May 16-22	1	1	
Do	Aug 17-Sept 11	3	2	
Uganda	Mar 1-June 30	732	574	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	
China				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug 7	28		
Foochow	June 6-July 31			Several cases Not epidemic
Nanking	May 9-Sept 18			Prevalent.
Swatow	July 25-31	14		
Ecuador				January-June, 1926 Cases, 385; deaths, 154
Chimborazo	January-June	9	2	Rats taken, 766
Guayaquil	May 16-June 30	6		Rats taken, 30,914; found infected, 31.
Do	July 1-Sept 30	16	3	Rats taken, 62,544; found infected, 89.
Leon	January-June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato Huachi, and Picayhua Rats taken, 1,542.
Egypt				Jan 1-Oct 21, 1926. Cases, 139.
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
Sidi Barrani	Sept 30-Oct 21	23	3	In western desert.
France:				
Marseille	July 8	1	1	Reported July 24.
Paris	Oct 18	1		
St Denis	Reported Aug. 2	1		Vicinity of Paris
St Ouen	Aug 14	2		Suburb of Paris.
Great Britain.				
Liverpool	Aug. 29-Sept. 4	2	1	
Greece:				
Athens	Apr 1-May 31	16	4	Including Piræus.
Do	Aug 1-Sept 30	20	5	Do
Patras	May 27-June 12	4	1	
Do	July 25-Oct. 2	8	4	
Zante	May 17	1		
Hawaii Territory:				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Honokaa	Oct 6	1	1	
Paauhau	July 18-24			Plague-infected rat trapped.
India				Apr 25-June 16, 1926: Cases, 53,001; deaths, 41,576 June 27-Sept 25, 1926 Cases, 7,274; deaths, 4,135
Bombay	May 2-June 26	16	15	
Do	July 18-Oct 9	13	12	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 26, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
India—Continued				
Madras Presidency	Apr. 25–June 26	162	93	
Do	July 4–Sept 25	720	349	
Rangoon	May 9–June 26	20	15	
Do	June 27–Oct 9	84	74	
Indo-China				
Saigon	May 23–June 26	8	3	
Do	July 18–Aug 7	2	1	
Iraq				
Baghdad	Apr 18–June 12	161	108	
Do	July 18–Sept 11	4	4	
Japan				
Yokohama	July 2–Aug 10	9	80	
Java				
Batavia	Apr 24–June 19	65	65	
Do	June 26–Oct 9	80	78	
Cheribon	Apr 11–24	3	3	
Do	Sept 12–18	1	1	
East Java and Madura	June 13–19	1	1	
Do	July 25–31	1	1	
Surabaya	Aug 22–Sept 25	18	2	
Madagascar				
Ambositra Province	May 1–15	4	4	Septicemic.
Antsirabi Province	June 16–30	4	4	
Itasy Province	do	17	10	
Do	Aug. 16–21	1	1	
Maevatanana	do	2	2	
Majunga Province	June 16–30	10	6	
Do	Aug 16–31	15	15	
Mananjary Province	do	1	1	
Moramanga Province	Apr 1–15	2	2	Do
Tamatave Province	Aug. 16–30	15	10	
Tananarive Province				Apr. 1–June 30, 1926. Cases, 130, deaths, 120 July 1–Aug 31, 1926 Cases, 126, deaths, 119
Towns—				
Majunga	Aug 1–15	14	10	
Tamatave (Port)	May 16–31	1	1	
Do	July 1–Aug 15	6	5	
Tananarive	Apr 1–June 30	7	7	
Do	July–Aug 31	24	24	
Mauritius				
Port Louis	July 31	1	1	
Nigeria				Feb 1–June 30, 1926 Cases, 191; deaths, 163 July 1–31, 1926 Cases, 121, deaths, 112,
Peru				May–June, 1926 Cases, 57, deaths, 16 July 1–Sept 30, 1923 Cases, 89; deaths, 52
Departments—				
Ancash	May 1–31			Present
Do	July 1–Sept 30	2		
Cajamarca	May 1–June 30	10	4	
Do	Aug 1–Sept. 30	1		
Ica	May 1–31	1		
Do	July 1–31	1		
Junin	Sept 1–30	21	20	
Lambayeque	do	1		
Libertad	May 1–31	4		
Do	Sept 1–30	3	1	
Lima	May 1–June 30	29	12	
Do	July 1–Sept 30	60	31	
Piura	June 1–30	13		
Russia				Jan. 1–Mar 31, 1926 Cases, 37.
Senegal				Nov 1–30, 1925 Cases, 3, deaths. 2 Mar 1–June 30, 1926, Cases, 312; deaths, 213
Siam				Apr 1–Oct. 2, 1926 Cases, 15; deaths, 10
Bangkok	May 23–June 26	2	2	
Do	July 18–24	1	1	
Straits Settlements				
Singapore	May 2–8	1	1	
Do	July 4–17	1	1	
Syria:				
Beirut	July 1–Aug 10	2		
Do	Oct. 15			Present.
Tunisia	May 11–June 30	174		
Do	July 1–Aug 20	13		
[illegible]	June 9	3		9 cases 30 miles south of Kairouan

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 26, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Turkey:				
Constantinople	Aug 1-Sept 25	7	4	
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug 21	3	3	
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District	Aug 15-21	1		
Protestpan	May 9-22	3	3	
On vessel				
Steamship Zaria	September, 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa, 29 plague-infected rats found on board

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				July 21-Sept 20, 1926 Cases, 230.
Algiers	May 21-June 20	14		
Do	July 1-Aug 31	3		
Arabia				
Aden	Oct 3-9	1		Imported
Belgium				Sept 1-30, 1926 Cases, 2
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-Aug 31	16	8	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Oct 2	71	30	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-Sept 25	29	19	
Pernambuco	July 11-Sept 25	166	22	
Porto Alegre	Aug 10-31	2		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 25	2,534	1,338	
Do	Oct 3-16	196	113	Jan 1-Oct. 16, 1926: Cases, 3,601; deaths, 1,896
Sao Paulo	June 27-Aug 22		5	
Santos	Mar. 1-7		1	
British East Africa.				
Kenya—				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa.				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Do	Sept 11-17	1		
Canada				May 30-June 26, 1926: Cases, 70. June 27-Oct 30, 1926 Cases, 322
Alberta				May 30-June 12, 1926: Cases, 3. June 27-Oct 30, 1926 Cases, 62.
Calgary	Sept 5-Oct 30	26		
British Columbia—				
Vancouver	Aug. 16-Sept 12	3		
Manitoba				May 30-June 26, 1926 Cases, 15. June 27-Oct 30, 1926: Cases, 48
Winnipeg	June 6-12	5		
Do	July 4-Nov. 6	13		
New Brunswick—				
Northumberland County	Oct 11-23	1		
Ontario				May 30-June 26, 1926: Cases, 36. June 27-Oct. 30 Cases, 117.
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2		
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 26, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Canada—Continued				
Ontario—Continued				
Peterboro	Sept 1-30	10		
Toronto	July 18-Oct 23	12		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16 June 27-Oct 30 Cases, 95
Regina	July 4-Sept 25	3		
Ceylon				Mar 14-May 29, 1926 Cases, 44, deaths, 3 Sept 12-18, 1926 Cases, 2
Colombo	Sept 19-Oct 2	6		
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Changsha	Aug 8-14	1		
Chungking	May 2-Oct 2			Present
Foochow	do			Do
Fushun	Sept 12-18	1		
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-Sept 11	2		Do.
Dairen	Apr 26-June 20	63	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do.
Harbin	May 14-June 30	21		Do.
Do	July 1-28	12		
Kai-yuan	May 16-June 30	10		Do.
Kungchuling	June 13-19	1		Do
Liaoyang	May 16-June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do.
Do	Aug 8-Oct 3	3		Do
Ssupingai	May 16-June 30	2		Do
Do	Aug 1-7	1		Do.
Teshihchiao	May 16-June 30	2		Do
Tieh-ling	Sept 27-Oct 3	1		
Wa-feng-tien	do	3		Do
Do	Aug 1-7	1		Do
Nanking	May 8-Sept 18			Present
Shanghai	May 2-June 26	10	25	Cases, foreign. Deaths, population of international concession, foreign and native
Do	June 27-July 24	3	3	
Swatow	May 9-Sept 25			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-June 30, 1926 Cases, 667, deaths, 146 July 1-31, 1926 Cases, 82, deaths, 27
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Oct 7	13	6	
Cairo	Jan 29-May 13	39	8	
Estonia				May 1-June 30, 1926 Cases, 3
France				Mar 1-June 30, 1926 Cases, 141; July 1-Aug 31 Cases, 24
Paris	Sept 1-Oct 10	43	9	
St. Etienne	Apr 18-June 15	7	3	
Do	Sept 16-30	2	1	
French Settlements in India	Mar 7-June 26	282	282	
Do	June 27-Aug. 28	68	68	
Germany				
Coblenz	Oct 24-30	1		
Gold Coast	Mar 1-June 30	9		
Do	July 1-31	20	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 26, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Great Britain				
England and Wales				May 23-June 26, 1926 Cases, 933, June 27-Oct 16, 1926 Cases, 1,638
Birmingham	Sept 26-Oct 2	1		
Bradford	May 23-29	1		
Do	Aug 29-Sept 4	1		
Hull	Oct 17-23	1		
London	Sept 26-Oct 16	3		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-Oct 30	5		At Gateshead, several cases reported
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Oct 23	21		
South Shields	Oct 3-9	1		
Greece				
Athens	July 1-31	71	6	Including Piraeus
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr 25-June 26, 1926 Cases, 54 851, deaths, 14,771 June 27-Sept 25, 1926 Cases, 27 061, deaths, 8,231
Bombay	May 2-June 26	220	134	
Do	June 27-Oct 9	118	64	
Calcutta	Apr 4-May 20	171	152	
Do	June 13-26	24	18	
Do	June 27-Oct 2	45	42	
Karachi	May 16-June 26	44	18	
Do	June 27-Oct 2	14	7	
Madras	May 16-June 26	7	4	
Do	June 27-Oct 16	76	20	
Rangoon	May 9-June 26	10	5	
Do	July 4-Sept 11	21	4	
Indo-China				
Saigon	May 9-June 26	2		
Iraq				
Baghdad	do	8	3	
Do	July 4-Sept 11	3	1	
Basra	Apr 18-June 22	34	25	
Do	Aug 15-21	1		
Italy				Mar 28-June 26, 1926. Cases, 34. June 27-July 31, 1926 Cases, 11.
Catania	Aug 9-15	2		Entire consular district, including island of Sardinia
Rome	June 14-20	4		
Jamaica				Apr. 25-June 26, 1926. Cases, 201. (Reported as alastrim)
Do				June 27-Oct. 30, 1926 Cases, 227. (Reported as alastrim)
Japan				Apr 11-June 26, 1926: Cases, 658 June 27-Aug. 28, 1926 Cases, 70
Kobe	May 30-June 5	1		
Nagoya	May 16-June 22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug. 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-June 25	2		Province
Do	July 24-Oct 9	16		Do
East Java and Madura	Apr. 11-July 3	100	6	
Do	July 4-Aug 7	43	1	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Do	July 18-Sept 25	143	8	
Latvia				Apr. 1-June 30, 1926 Cases, 5
Mexico				Feb 1-June 30, 1926 Deaths, 1,525.
Aguascalientes	June 13-26		3	
Guadalajara	June 8-14		2	
Do	June 29-Sept 27		8	
Mexico City	May 16-June 5	3		Including municipalities in Federal District.
Do	July 25-Sept 25	6		Do.
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan. 1-June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-Nov 6		21	
Torreon	May 1-June 30		17	
Do	July 1-Oct 23		14	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 26, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Netherlands				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-June 30, 1926 Cases, 521; deaths, 49
Persia				
Teheran	Apr 21-July 23		10	
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May 1, 1926 Cases, 12, deaths, 1 June 27-Sept 11, 1926 Cases, 416, deaths, 1
Portugal.				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Oct 23	26	6	
Oporto	May 23-June 5	4		
Do	July 11-24	2		
Russia				Jan 1-Apr 30, 1926 Cases, 2 529
Siam				Apr 1-Oct 2, 1926 Cases, 590, deaths, 236
Bangkok	May 2-June 12	23	20	
Do	July 4-Oct. 2	77	60	
Spain				Jan 1-June 30, 1926 Deaths, 99.
Valencia	Aug 22-Oct 23	3		
Straits Settlements				
Singapore	Apr 25-May 1	1		
Do	July 11-17	1		
Sumatra				
Medan	Aug 22-28			One case varioloid
Switzerland:				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tripolitania	Apr 1-June 30	12		
Tunisia				Apr 1-June 30, 1926 Cases, 17. July 1-Sept 30, 1926 Cases, 38.
Tunis	Aug. 11-30	2		
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks.
Do	Aug 15-21			Do
Idutya district	May 23-29			Do
Natal	May 30-June 5			Do
Orange Free State	June 20-Aug 28			Do.
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts.
Do	Aug 29-Sept 4	1		Native.
Johannesburg	May 9-June 12	5		
Do	July 11-Sept 25	4		
Pretoria	Sept 19-25	1		
Yugoslavia				Apr. 15-30, 1926 Cases, 2, deaths, 1.
Zagreb	Aug. 9-15	*2		
On vessels				
S. S Karapara				At Zanzibar, June 7, 1926 One case of smallpox landed At Durban, Union of South Africa, June 16, 1926 One suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				July 21-Sept 20, 1926 Cases, 34; deaths, 1.
Algiers	May 21-June 30	7	1	
Do	July 21-Aug 31	3		
Argentina.				
Rosario	Feb 1-28	2		
Bolivia.				
La Paz	June 1-30		1	
Do	Aug. 1-31	9	1	
Bulgaria				Mar. 1-June 30, 1926 Cases, 87; deaths, 14.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 26, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Chile				
Antofagasta	May 23–June 26	4		
Do	June 27–July 3	1		
Concepcion	June 1–7		1	
Valparaiso	Apr 29–May 5		1	
Do	Aug. 14–Sept 18	7		
China				
Antung	June 14–27	7	1	
Do	June 28–Oct 10	37	1	
Canton	May 1–31	1		
Chungking	Aug 29–Sept 4			Present
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1–June 30, 1926 Cases, 1,005, deaths, 112 July 1–31, 1926 Cases, 37, deaths, 6
Chemulpo	May 1–June 30	38	2	
Do	July 1–31	7	2	
Gensan	June 1–30	1		
Seoul	do	8	3	
Do	July 1–Aug 31	8		
Czechoslovakia				Jan 1–June 30, 1926 Cases, 156; deaths, 6
Egypt				
Alexandria	July 16–Aug 19	3		
Do	Oct 1–7	1	1	
Cairo	Jan 29–May 13	89	27	
Do	July 23–Aug 5	1		
Port Said	June 4–24	4	1	
Do	July 9–Oct 7	5	1	
France	Aug 1–31	5		
Great Britain				
Scotland—				
Glasgow	July 30–Aug 21	9	1	
Greece				
Athens	Sept 1–30		17	Including Piræus.
Hungary	May 1–June 30	3		
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30–June 5	1		
Do	June 27–Aug 23	2	1	
Cork	June 5	1		
Cork County	Oct, 17–23	1		
Kerr County—				
Dingle	June 27–July 3	1		
Italy				Mar 28–May 8, 1926: Cases, 3.
Palermo	Sept. 12–18	1		
Japan				Mar 28–May 29, 1926 Cases, 37.
Latvia				May 1–June 30, 1926. Cases, 19. Aug 1–31, 1926. Cases, 2.
Lithuania				Mar 1–June 30, 1926 Cases, 199; deaths, 22. July 1–Aug. 31, 1926 Cases, 23
Mexico				Feb 1–June 30, 1926 Deaths, 189.
Durango	July 1–31		1	
Mexico City	May 16–June 5	20		Including municipalities in Federal District
Do	June 13–19	9		Do
Do	July 25–31	3		Do
Do	Aug 15–Oct 30	69		Do
San Luis Potosi	June 13–26			Present, city and country
Morocco				Mar 1–June 30, 1926. Cases, 426 July 1–Aug. 31, 1926 Cases, 20
Norway				
Stavanger	Sept 6–12	1		
Palestine				Mar 1–June 30, 1926. Cases, 14; deaths, 1 Aug 10–Oct 11, 1926. Cases, 12
Gaza	July 6–12	1		
Haifa	July 13 Aug 30	5		
Halalal	Aug 17–23	1		
Jaffa district	June 15–28	5		
Do	Sept 28–Oct. 4	1		
Jerusalem	Sept 14–27	2		
Majdal district	July 13–Aug 2	2		
Nazareth district	do	3		
Petah Tokvah	Oct 5–11	3		
Tiberias	Aug 3–9	1		
Yavniel	Aug 17–23	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to November 26, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Persia				
Teheran	May 23-June 22		1	
Peru				
Arequipa	Jan 1-31		2	
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 87 June 27-Sept 18, 1926 Cases, 294, deaths, 22
Rumania				Mar 1-June 30, 1926 Cases, 899, deaths 83 July 1-31, 1926 Cases, 65, deaths, 9
Russia				Jan 1-Apr 30, 1926 Cases, 18,647
Spain	Jan 1-June 30		13	
Tunisia				Apr 1-June 30, 1926 Cases, 11[illegible] July 1-Sept 20, 1926 Cases, 101
Tunis	June 11-30	3		
Turkey				
Constantinople	June 16-22	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths, 19
Do				July 1-31, 1926 Cases, 90, deaths, 17
Cape Province				Apr 1-June 30, 1926 Cases, 202, deaths, 24, native July 1-31, 1926 Cases, 58, deaths, 15.
Glengray district	June 27-July 3			Outbreaks
Grahamstown	do	1		
Natal				Apr 1-June 30, 1926 Cases, 28 July 1-31, 1926 Cases, 23; deaths, 2
Durban	July 25-Sept 18	11	1	
Orange Free State				Apr 1-June 30, 1926 Cases, 24 deaths, 4 July 1-31, 1926. Cases, 7
Transvaal				Apr 1-June 30, 1926. Cases, 10, deaths, 5 July 1-31, 1926 Cases, 2 Aug. 15-21, 1926
Johannesburg	Aug 29-Sept 4	1		Outbreaks
Wakkerstroom district	June 20-26			Outbreaks.
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926. Cases, 48, deaths, 7 July 1-Aug 31, 1926 Cases, 3, deaths, 1.
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr 1-June 30	8	4	
Nigeria	June 1-30	1	1	

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TREASURY DEPARTMENT

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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C C PIERCE, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912.

They contain: (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world (2) Articles relating to the cause, prevention, or control of disease. (3) Other pertinent information regarding sanitation and the conservation of the public health

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PUBLIC HEALTH REPORTS

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THE WORK OF THE UNITED STATES PUBLIC HEALTH SERVICE

The United States Daily, published in Washington, and presenting the official activities of our National Government, started on October 25, 1926, a series of articles, each one a brief sketch of the work of a bureau or office of the Government The Public Health Service was selected as the first Government bureau to be described. The eight service articles appeared as copyrighted material in the issues of October 25 to 30, and November 1 and 2, 1926. Each article was prepared by a staff writer of the United States Daily after an interview with the Surgeon General and the Assistant Surgeons General in charge of each of the seven divisions of the bureau. The Public Health Service is reprinting these eight articles with the permission of the United States Daily, for the information of health officers and sanitarians.

UNITED STATES PUBLIC HEALTH SERVICE

Personal well-being is so obviously an individual and personal characteristic that it is frequently a little difficult to convince a citizen living on the Pacific coast that his health is affected by the activities of an agency of the Federal Government 3,000 miles away. In fact, save in times of epidemic, the average citizen is likely to take little interest in the activities of his local health officials, to say nothing of those of the State or Nation. When there is an outbreak of some contagious disease in his community, he becomes intensely interested in methods of preventing the spread of the contagion. But when the outbreak has abated this interest wanes, and that is why there is another outbreak at some later date.

"In time of peace, prepare for war," was the advice of one whom the world generally concedes to have been wise. And it is advice which can be adapted profitably to the work of those charged with the protection of that vital but rather nebulous thing called public health. Preparation for war in the political and military sense does not mean merely storing up supplies of arms and munitions such as were used in the last war. If it did, modern nations would be using clubs instead of tanks, and bows and arrows instead of poison gas and heavy artillery. Preparation for war means constant efforts to improve weapons and constant diligence to prevent the outbreak of

hostilities; or, if the latter is impossible, then an effort to so localize the outbreaks as to reduce the enemy's potentialities for damage to a minimum.

It is the duty of public health authorities not only to fight epidemics and diseases while they are actually present but to devise means of preventing epidemics and diseases. This is the reasoning back of the elaborate and far-flung system of disease prevention and control which, in the aggregate, is the United States Public Health Service.

In carrying out its duties the Public Health Service employs more than 8,000 men and women, and expends appropriations aggregating more than ten and a half millions of dollars annually.

The organization now known as the Bureau of the Public Health Service had its origin in the Marine Hospital Service, which was established by an act of Congress approved July 16, 1798 This act authorized the President to nominate and appoint medical officers to furnish care to sick and disabled seamen at such ports and other places in the United States as presented needs for services of this nature. It was provided that this care might be given either in hospitals maintained by the United States or in civilian institutions with which contracts might be negotiated.

A tax of 20 cents per month to be collected by collectors of customs from all seamen employed on American vessels engaged in foreign and coastwise trade was the method prescribed by the early legislators for the financing of their first step in safeguarding the public health. It is for this reason that the Public Health Service is a part of the Treasury Department to-day.

The first marine hospital built under the authority of the act of 1798 was at Norfolk, Va., in 1800 In 1802 a hospital was built at Boston, and others followed both along the Atlantic seaboard and along the Mississippi and Ohio Rivers and the Great Lakes.

Necessarily, in caring for sick and disabled seamen in American ports, the medical officers appointed to serve in these early marine hospitals became familiar with the diseases brought into the country from abroad. It frequently happened that these medical officers were the first physicians to diagnose such diseases as cholera, yellow fever, and smallpox, which threatened the welfare of ports of entry. This was particularly true in southern ports, then exposed to frequent dangers from yellow fever.

During epidemics in the early days the Marine Hospital Service frequently received presidential authorization to aid local health authorities in relief and control measures. The marine hospitals and some of the medical personnel as well were used by both the North and South during the Civil War for the care of the military forces.

Gradually, Congress began to extend the functions of the Marine Hospital Service, and to make of that organization a Federal health service. In 1878 the service was given authority to impose quarantine to prevent the entry of disease into the United States from abroad. It was not until 1890 that authority was given to impose quarantines to prevent interstate spread of disease, and then the authority was limited to the prevention of cholera, yellow fever, smallpox, and plague. In 1893 this authority was extended to cover all infectious and contagious diseases, and provision was made for cooperation with State and municipal health agencies.

Congress recognized the value of military discipline in an organization which had to combat epidemic diseases, and in 1889 authorized the organization of the Marine Hospital Service along military lines, with officers holding commissions in grades similar to officers of the medical department of the Army.

In 1902 the name of the organization was changed to "The Public Health and Marine Hospital Service," and in 1912 this name was changed to that now borne by the service

While the public health functions of the service had their inception in the prevention of the introduction and spread of quarantinable diseases, their development was largely the result of changes in public opinion Investigative functions began with inquiries into the causes of such diseases as yellow fever and cholera In 1902 the Hygienic Laboratory was established, and to-day this institution is recognized as one of the foremost research centers in the world.

The functions of the service may be summarized as follows:

1. Furnishing medical service to American seamen and other beneficiaries
2. Protection of the United States from the introduction of disease from without.
3. Prevention of the interstate spread of disease and suppression of epidemics.
4. Cooperation with State and local boards of health as well as with Federal agencies in health matters.
5. Investigation of diseases of man.
6. Supervision and control of biological products.
7. Public health education and dissemination of health information.

One of the functions exercised by the service—that of supervision and control of biological products—is of tremendous importance. It means that all viruses, vaccines, therapeutic serums, toxins, antitoxins and analogous products applicable to the prevention and cure of diseases of man are tested by the service for purity and potency. The value of such products supervised by the service in one year is well over $10,000,000.

As organized at present the Surgeon General administers the affairs of the Bureau of the Public Health Service through seven administrative divisions. These are: The Division of Marine Hospitals and Relief, the Division of Domestic Quarantine, the Division of Foreign and Insular Quarantine, the Division of Personnel and Accounts, the Division of Sanitary Reports and Statistics, the Division of Scientific Research, and the Division of Venereal Diseases.

Division of Scientific Research

Save for his superior mental capacity, man enjoys no particular advantage over other forms of life in the struggle against disease Therefore his most important weapon in that struggle is the application of that mentality to methods of promoting his health. The most effective method of that application devised so far is scientific research through the experimental method

Granted that the necessity for research exists, the question then presents itself as to whether or not the Government should engage in research. Experience and reason both command an affirmative answer.

While it is true that in the United States as elsewhere a large amount of research connected with the safeguarding of public health is carried on by private agencies, there are, nevertheless, compelling reasons why the Government itself should be represented in this field.

A careful analysis will show that by far the greater part of the research work conducted under private agencies is directed to the solution of problems that are almost entirely local or problems pertaining to curative rather than to preventive medicine. On the other hand, the Government, being interested in the welfare of the entire population, concentrates its efforts upon problems affecting large groups and upon preventive rather than curative methods. Occasionally there is an overlapping, as in the case of syphilis, where to cure one case is to prevent another.

The Government also has a duty to perform in checking up on the results of outside research to determine whether or not much of this information can be recommended for general guidance and in formulating scientific information for administrative purposes. Then, too, there are certain problems which no private agency is equipped to solve. These are problems requiring observations widely distributed in a geographic sense and other problems which can be solved only by concentration of many different research activities working in cooperation and simultaneously. In addition to all of these reasons, there is, of course, the Government's obligation to promote the welfare of the people—an obligation which is not shared by outside private agencies, which, properly enough, have their own ends in view in many of their activities.

Recognizing the necessity and propriety of governmental research in the public health field the Congress in the act of August 14, 1912, provided that:

"The Public Health Service may study and investigate the diseases of man and conditions influencing the propagation and spread thereof, including sanitation and sewage and the pollution, either directly or indirectly, of the navigable streams and lakes of the United States."

An earlier act of Congress had established the Hygienic Laboratory in Washington, the scene of an important part of the research activities carried on by the Division of Scientific Research of the Public Health Service.

The scope of the division's activities may be described as follows:

1. The investigative functions have been extended to include every major topic of public health interest The approaches to the problems have been from several standpoints—(*a*) of the basic sciences in the laboratory; (*b*) of clinical study; (*c*) of epidemiology; (*d*) of sociology and economics; (*e*) of vital statistics; (*f*) of public health administration.

2 The control function (biologic products), authorized by the act of July 1, 1902, has extended to the limitations of the act in so far as permitted by the funds appropriated. It has included researches necessitated by adequate control. The control of biologic products necessitates inspections in many parts of the United States and in those European countries where these are necessary.

The activities of this division have carried its agents into every State in the Union, the insular possessions of the United States, Mexico, and several countries of Europe.

In addition to those activities which it carries on independently the division does not hesitate to cooperate with other agencies doing work within its field. In exchange for opportunities for research and access to material the division always stands ready to cooperate with any Government agency in the solution of problems relating to public health, subject to the consideration of relative importance in terms of service to the country and also subject to limitations of funds and personnel. This same readiness applies to nongovernmental organizations with the additional considerations of their aims, purposes, and good faith.

At various times the division has cooperated in research with many public and private agencies, including the Bureau of Mines, the Bureau of Standards, Johns Hopkins University, Yale, Harvard, the National Research Council, many manufacturing and industrial organizations, and the State boards of health of the various States of the Union.

A topic is considered eligible for investigation by this division provided it is of public-health interest, and if funds and personnel are available, under the following circumstances:

1. The subject is of widespread significance and no adequate solution is at hand.

2. Other agencies are not studying the subject, or at least not from the standpoint of public health.

3. The subject threatens to become of widespread importance, rendering anticipatory research advantageous.

The principal activities of the division at present include:

Studies of a number of diseases of man, including cancer, clonorchiasis, encephalitis lethargica, goiter, influenza, leprosy, malaria, nutritional diseases, pneumonia, Rocky Mountain spotted fever, trachoma, tuberculosis, tularæmia and typhus fever; investigations on the subjects of administrative health practice, child hygiene, drug addiction, industrial hygiene and sanitation, mental health, milk, morbidity, oxidation reduction, stream pollution and salt-marsh mosquito control; and studies and inspections required for the regulation of interstate traffic in biologic products.

Division of Marine Hospitals and Relief

The Division of Marine Hospitals and Relief is part of the Bureau of the Public Health Service which performs the functions for which the service was established by Congress in 1798. At that time, indeed, the organization was known as the Marine Hospital Service. the idea of a Federal health department was something entirely outside the ken of political thought in the infant Nation.

From time immemorial it has been the law of the sea that vessels must provide medical attention for seamen. Hence, when the Congress wished to encourage the embryonic merchant marine of the newborn Republic, one of the means it took was to relieve the ships of the burden imposed by this requirement

Thus it came about that some of the earliest institutions established by the Federal Government were marine hospitals. Marine hospitals antedated naval hospitals and, in the early days, the former took care of officers and men of the Navy. The first marine hospital in Boston, which, incidentally, was the first general hospital in that city, furnished hospital care for wounded who fought under John Paul Jones

The earlier hospitals were primitive affairs according to modern standards. Medical knowledge has advanced greatly in the past 137 years and the marine hospitals have kept abreast of the times. Attending specialists augment the regular staff of medical officers; trained graduate nurses and dietitians, as well as skilled physiotherapy aides, are employed. The medical and surgical work of the marine

hospitals compares favorably with that of representative hospitals in their respective ports, although some of the hospitals are architecturally obsolete For instance, the present marine hospitals at New Orleans and San Francisco, built just after the Civil War, were products of a school of thought and medical knowledge which held that hospitals must be of the flimsiest possible construction so that as soon as they became infected with hospital gangrene or some similar unwelcome visitor, the building could be burned. These two hospitals, "built to burn," are still standing awaiting sufficient funds to substitute fireproof structures. It is a marvel that they have not long since realized the purpose for which they were built. Probably, the only reason these structures have not been burned is the ceaseless care with which they are guarded by a well-disciplined personnel. In all the years of the existence of marine hospitals not a single patient has been burned to death in a hospital fire—a most surprising record, particularly when the type of some of the early structures is considered Hospital fires have occurred, however; the first Chicago Marine Hospital was destroyed in the great fire of 1871.

The marine hospitals in the beginning were financed through a tax of 20 cents per month, later increased to 40 cents, deducted from the wages of each seaman and collected by the collector of customs. Subsequently this was replaced by a tonnage tax and finally by direct appropriations out of the Treasury. It has been nearly 50 years since the 40 cents per month tax was collected, but aged sailors still sailing the seas and coming into the hospitals recall that they helped build these institutions out of their own wages.

There are 25 marine hospitals to-day in various ports of the United States. The policy of the Government is to build such hospitals only in ports where it is more economical to have Government-owned buildings than to provide hospital care through contractual arrangements with private institutions. Provision for the care of seamen is made in 150 ports of the United States and insular possessions and there are always between 3,000 and 4,000 sailors in hospitals under the supervision of this division.

The growth of the merchant marine and the general increase in the population of the United States have been reflected in the expansion of marine hospital functions. More than 300,000 persons annually now apply for treatment or examination at these hospitals or out-patient offices. There were furnished last year 1,321,309 patient days of hospital care and 572,139 out-patient treatments, the latter item including the vaccination of 35,719 beneficiaries against smallpox and typhoid.

Dentistry, a modern hospital necessity, is supplied by 30 full-time dental officers who last year gave to 30,811 beneficiaries 110,320 treatments. In the marine hospital laboratories 192,308 bacteriological

and other clinical laboratory examinations were made, and 37,535 X-ray exposures made for diagnostic purposes.

The marine hospitals are open to personnel of the Army, Navy, and Coast Guard, to patients of the United States Veterans' Bureau, and to injured employees of the United States Government receiving care under the supervision of the Employees' Compensation Commission The hospital on Ellis Island, New York City, is operated chiefly for diseased immigrants detained by the immigration authorities It is also the policy of the Government to allow foreign seamen to enter marine hospitals as pay patients when a request is made on their behalf by the master of a foreign vessel or by a foreign consul

It costs a little more than $5,000,000 per year to maintain the marine hospitals. Approximately $500,000 a year is returned to the Government for the various classes of pay patients, including immigrants. The average cost of operation per patient per day has been reduced from $4.08 in 1923, $3 84 in 1924 and $3.80 in 1925 to $3.71 for the fiscal year ended June 30, 1926. This is lower than the average cost of operation of hospitals belonging to the Army, Navy, or the Veterans' Bureau, and considerably less than that of civilian hospitals furnishing equivalent services and having trained nurses and salaried staffs of physicians and surgeons.

An idea of the costs of operation may be obtained from the figures showing some of the expenditures for hospital supplies during the past fiscal year. Some of the items are adhesive plaster, $4,347.45; salvarsan and other supplies used in the treatment of syphilis, $6,410.43; gauze and surgical dressings, $17,536.28; ether and other anesthetics, $1,786.98; catgut ligatures for surgical operations, $2,656.23; soap, $25,855.23; clinical thermometers, $2,714.55; X-ray films, $15,707 65; insulin, $1,794.

The item for the purchase of insulin suggests the remarkable progress which has been made in the treatment of diabetes since the use of this remedy was initiated. Since its use was introduced there has been a constant increase in the number of diabetes cases admitted to marine hospitals and a constant decrease in the number of deaths. The figures are, 1923, 78 cases and 23 deaths; 1924, 97 cases and 12 deaths; 1925, 108 cases and 9 deaths; 1926, 110 cases and 5 deaths. The figures refer to fiscal years.

Starting out merely as an agency doing relief work for seamen, the Public Health Service has expanded and acquired manifold and varied functions. It was natural for quarantine duties to be added, together with other functions relating to the safety of ships and the welfare of their personnel. It became the agency which examines applicants for license as pilots and other ships' officers who must pass satisfactory tests for vision, color vision, and hearing. Lighthouse keepers are also required to pass similar examinations before they are

appointed. The Public Health Service must also vouch for the physical ability of sailors qualifying as "able-bodied seamen," of which the crew of an American ship must have not less than 65 per cent; and since ships' officers must be versed in first aid before licensed by the Steamboat Inspection Service, courses of instruction have been organized in 43 ports where medical officers give the necessary instruction preliminary to examination of the candidates in this subject. The physical examinations, which number nearly 100,000 yearly, include those of the United States Coast Guard recruits, the United States Civil Service, Pension Bureau, and Army training camps

All medical service for the Coast Guard is furnished by the United States Public Health Service, which also sends its medical officers with the cruising cutters on the Alaska seal patrol and the North Atlantic ice patrol, and wherever else these ships may go.

Alcoholic liquors and narcotics required for medicinal use on board any American or foreign ship in an American port are purchased or otherwise authorized by an officer of the Public Health Service in amounts according to the governing medicinal needs.

At Fort Stanton, N. Mex., a marine hospital is maintained for tuberculous patients where provision is made not only for medical treatment but also for employment of patients who are approaching fitness for discharge. These latter are employed for several months in order to make sure that their return to health has been permanent. Only those tuberculous patients who are expected to recover are sent to Fort Stanton; the others are treated in various port hospitals.

The National Leper Home at Carville, La., is operated by the Public Health Service. There are now about 270 patients there, culled by State health officers from the population at large. Treatments by chaulmoogra oil, X ray and mercurochrome, by violet ray and other lights, as well as by hydrotherapy and many other agents, have yielded encouraging results and some cures are effected. The radio, baseball, moving pictures, a library, a school and religious solace furnished by chaplains and chapels for both Catholics and Protestants bring some measure of contentment to the inmates. Leper patients physically fit are employed by the Government at nominal pay in light occupations at this institution, thus providing some diversion and a small means of income to those unfortunates, who are, however, clothed and otherwise well cared for at Federal expense.

From 1919 to 1922 the Public Health Service was designated as the principal agency to care for World War veterans in need of hospital care. To do this the service rented hospital space, converted hotels and other buildings to hospital uses, and, in general, did the best it could to meet an unprecedented situation which confronted it unexpectedly.

In 1922, when Congress assigned this work to the Veterans' Bureau, the Public Health Service turned over 57 hospitals with 17,500 beds, 900 physicians, 1,400 nurses, and 9,200 employees More than a million veterans passed through these hospitals during the time they were under the supervision of the Public Health Service

The marine hospitals, in addition to their other functions, may be considered as a second line of defense behind the foreign quarantine division in preventing the entry of quarantinable diseases into the country. For example, only recently, a seaman at New Orleans applied to the marine hospital there for treatment. It was found that he was suffering from bubonic plague. The quarantine officials were notified at once and his ship was thoroughly fumigated to destroy the rats and fleas through which this disease is transmitted Under similar circumstances a seaman who had been admitted at San Francisco was found to be suffering from smallpox. Such cases are rare, of course, because the quarantine regulations are most efficiently administered.

Recently the marine hospitals have made it a practice to transmit medical advice to ships at sea by wireless. These messages must, for the present, at least, be transmitted through commercial stations, but the latter have been very generous in giving this service without charge. It frequently happens that the advice thus given besides aiding the patient enables the ship to continue on its course instead of putting in at some unscheduled port with consequent loss of valuable time and great inconvenience to passengers.

Division of Foreign and Insular Quarantine

The right of one community to protect the health of its members by excluding outsiders afflicted with communicable diseases has been recognized and exercised since the dawn of history So well established is this right that the principle has never been questioned in all of the countless controversies which have raged over its application to specific cases Quarantines have been enforced as to individuals, cities, and nations, by methods ranging from religious tabus of the primitive races to the bayonets and warships of the modern and more materialistic peoples.

Geographically, the quarantines of antiquity and, indeed, up to very recent times, were comparatively limited. The methods by which the great scourge diseases were transmitted were not understood and, in many cases, it was thought that so long as physical contact with the diseased persons was avoided, the disease would not spread.

Two chief factors have combined to increase the geographic area of quarantines in modern times. The first is the discovery of the methods whereby diseases are transmitted, and the second is the

development of means of transportation which facilitate the transportation of disease bacilli as well as persons and property.

Thus it comes about that all modern civilized States now recognize the need for national quarantines and national agencies to enforce the quarantine regulations. The United States, due to the peculiar relationship between the individual States and the Federal Government, was one of the last of the great powers to put a national quarantine system into operation. In the early years of the Nation's existence the contention was advanced—and upheld by the courts—that the imposition and enforcement of quarantine regulations was an exercise of the police power reserved to the States

Quite early in its history the Public Health Service was authorized to advise and cooperate with the State health authorities Gradually this developed to a point where the various States came to realize the advantages of a central system for foreign quarantines and one by one the State legislatures voluntarily turned that function over to the Federal authorities The Public Health Service now administers the quarantine at all ports of the United States, and this work is done through its Division of Foreign and Insular Quarantine

This division has two major functions—prevention of the entrance of diseases from foreign countries into the United States, and medical inspection of aliens applying for admission to the United States as immigrants. In the exercise of the first-mentioned function the division has jurisdiction over all ships and all persons, citizens, and aliens coming into American ports from abroad. The second function, of course, has to do with aliens only. In practical operation it has been found necessary to separate the two functions from an administrative standpoint. This was done because in its inspection of immigrants the Public Health Service acts, more or less, as the agent for the Immigration Service of the Department of Labor. The work of the Health Service ceases, with respect to an immigrant, when he has been certified to the immigration authorities as either admissible or inadmissible physically. On the other hand, the Public Health Service has entire charge of the quarantine work at the ports.

There are three lines of defense against the quarantinable diseases cholera, plague, yellow fever, typhus fever, leprosy, smallpox, and anthrax. The first line consists of the public health physicians stationed abroad and working in cooperation with the consular officers to prevent diseases in any form from embarking on vessels bound for the United States; the second line is the system of inspection at the various ports of entry; and the third line is the cooperation between the Public Health Service and local health authorities, especially those at ports of entry, in "follow up" work

The Public Health Service, once the diseased person has been admitted to the United States, can control only interstate travel of such person. A system of cooperation has been established with city and State health authorities to follow cases released at the ports, such as diphtheria and other nonquarantiable diseases, and to notify the health officer, who cares for such a person until he is taken over by the local health authorities

Methods of preventing the entrance of quarantinable diseases vary with the diseases, as each spreads by different means and must be blocked accordingly. In the case of cholera, where the avenue of transmission is from person to person via the alimentary tract, the method is to prevent the entrance of any persons suffering from the disease. The work is complicated by the fact that certain persons seem to be immune from cholera themselves but can carry the germs of the disease and transmit them to others. These persons, known as carriers, are more difficult to guard against than persons actually suffering from the disease since the former may be entirely unaware of their condition. Cholera carriers are denied admission to the United States until they are noncarriers, and persons who have been exposed are detained long enough to determine whether or not they have been infected. Cholera, together with all of the other quarantinable diseases except typhus, leprosy and smallpox, has been exterminated in the United States.

Yellow fever, long the terror of the South, is probably the best example which can be cited of a disease almost entirely wiped out of existence by science. At one time there were periodic outbreaks in every southern State and throughout Central and parts of South America, but now the disease is found only in a few isolated districts. The fight against yellow fever was won when it was discovered that the disease is transmitted through one particular species of mosquito, the "*Aëdes ægypti*," generally known as the Stegomyia. Once this was ascertained the problem became the elimination of this mosquito on ship and its control on shore. The Stegomyia can fly but a short distance and breeds in fresh water about houses, which make it exceedingly vulnerable to careful control. Since the discovery of the method whereby yellow fever is transmitted, there has been only one outbreak of it in the United States, in 1905.

Plague, another quarantinable disease which claims its victims by the thousands in many parts of the world, is of two varieties—pneumonic and bubonic. The former, while very deadly, has occurred chiefly in Asia, only two outbreaks having occurred in this country. The bubonic variety is an ever present danger for nearly every port in the world. Just as yellow fever was found to be transmitted by the mosquito, so it was found that bubonic plague is transmitted through the combined agency of rats and fleas. The

rats themselves are subject to the plague, the fleas live on the rats until the latter die and then the fleas attack any warm-blooded animal, including man, and pass the disease along Fleas, however, specialize, and different animals have their own species that will live on no other animal except in emergencies Thus, rats have several varieties, and while all of them theoretically can transmit plague, practical observations and experiments now under way indicate that for practical purposes there is only one or possibly two species of fleas that need be considered. Fumigation of ships to rid them of rats and fleas is one of the methods employed, and considerable progress has been made, but in its search for better methods the Public Health Service has developed the rat proofing of ships, which, if successful, will be a surer and more economical way to remove this danger altogether.

Smallpox is now combated at ports chiefly through the use of the immunity reaction, which indicates whether or not a person may contract the disease. This is effective as a method of determining whether a previous vaccination is still effective and still retains its potency. Persons who have not been vaccinated or whose vaccinations are no longer active submit to another vaccination if they have been exposed to smallpox. No coercion is employed to induce persons to submit to vaccination, but if they are not vaccinated they must be detained in quarantine for 14 days. They rarely remain for that period, but ask to be vaccinated. Smallpox has been one of the historic scourges of man for centuries. Since the discovery of vaccination, about 100 years ago, the ravages of this disease have been curtailed to a remarkable degree, and it could be practically eliminated if vaccination were universal, but experience shows that neglect of this preventive is sooner or later always followed by a recrudescence.

Typhus fever is transmitted by body lice carrying the infection from one person to another. Hence, the method employed in fighting it is to destroy the lice. Just after the World War, when typhus was widespread in Europe, and when it was estimated that 3,000,000 persons died from it in five years, it was asserted by those in touch with the situation that the peasant classes of Europe were practically 100 per cent infested with body lice. It was at this time that the steamship companies installed their delousing plants on advice of quarantine officers stationed abroad, and all persons arriving were scrubbed and disinfected, if not scrupulously clean. At present less than one-tenth of 1 per cent of the persons arriving at American ports are found to be infested, and it is reported that on account of the requirements of the United States Public Health Service there has been a great improvement in conditions abroad, particularly in places where body lice had long been accepted as a matter of course.

Anthrax is much less important. It has been demonstrated that this disease has been frequently transmitted to man through infected bristles of shaving brushes Consequently, all shaving brushes imported to the United States must be made from bristles that have been disinfected.

Leprosy, the other quarantinable disease, is treated in a manner somewhat different from the others. It is still the same enigma to science that it has been for centuries. Some progress has been made in the treatment of leprosy through the injection of chaulmoogra oil derivatives, but the nature of the disease and how this treatment is of benefit are still unknown When a leper arrives at an American port he is sent to the Federal Leprosarium at Carville, La , if he is an American citizen If he is an alien he is deported. This disease does not present the problems of rapid incubation and free transmission that occur in connection with the other quarantinable diseases.

Persons found suffering from diseases in the quarantinable group are cared for in the Public Health Service hospitals until danger of transmitting the disease to others is past. Then, if they are American citizens, they are released. If they are aliens they are passed on to the immigration authorities.

In cooperation with the Department of Labor the Public Health Service, through its Division of Foreign Quarantine, makes the physical examinations for all prospective immigrants. During the fiscal year ending June 30, 1926, the officers of the division examined 614,972 applicants for admission and 872,842 alien seamen. Many of these examinations of immigrants were made abroad under the new system inaugurated in 1925, which has eliminated most of the heartaches and suffering of the old system and has excluded the unfit to an extent never before possible.

So far as physical condition is concerned, prospective immigrants are divided into three classes: Class A, those having defects which make them mandatorily excludable under the law; class B, those whose defects are not such as to make exclusion mandatory, but which may interfere with the applicant's ability to earn a living, and class C, those having minor defects which do not affect their admissibility but which are noted, nevertheless.

Division of Sanitary Reports and Statistics

It is a fundamental principle that in any warfare the success of the conflict largely depends upon our knowledge of whether there be an enemy, when, where, and in what numbers he may be found, and so in the fight against disease from a public health standpoint, whether it be municipal, State, national or international, it is of fundamental importance that responsible officials have early, accurate, and com-

plete knowledge as to the presence or absence of the important communicable diseases. In the absence of such knowledge there will be either a lack of vigilance, which may end in disaster, or, what is of vast importance in these days of commercial enterprise and rapid communication, there will be a futile and unnecessary expensive outlay against a supposed danger which does not exist

This has, within the past few decades, been brought out, particularly in the matter of yellow fever. So long as infectible countries, such as ours, knew of the general existence of yellow fever but did not know the exact endemic centers of this disease, elaborate precautions had to be taken at our maritime quarantine stations against all yellow-fever-suspected areas, whereas, at present, with our intelligence service, such precautions have been waived with benefit to commerce

The collection and dissemination of information concerning the prevalence of disease is of increasing importance in this age of speedy transportation facilities For instance, it is possible that a person infected with typhoid fever may, even by motor, traverse the entire width of the country before the completion of the incubation period of this disease.

The division of sanitary reports and statistics of the Public Health Service may well be described as the intelligence office of the Federal health agency, whose intelligence, however, is used throughout the world by other governments, as well as by our own local and State agencies. Broadly speaking, the work of this division has two general phases—first, the collection from all parts of the world, including our own country, of information having a bearing on the maintenance of public health, and, second, the dissemination of this information in such manner and to such persons and organizations as will make it most valuable. Between the collection and dissemination of information there is, of course, the very important work of compilation.

The information employed by the division is secured from many sources, local, State, Federal, and international. To begin with, every consul and consular officer stationed abroad makes a weekly report to the Public Health Service as a part of his routine duties. The reports are made on forms provided by the Public Health Service and bearing a list of the more important communicable diseases. The consular officer obtains reports from health officials of the country to which he is accredited, and from these reports and such other sources as are available he fills in the information required on the form and mails it to the Public Health Service. These reports by mail cover the following diseases: Cerebrospinal meningitis (epidemic); cholera, Asiatic; cholera nostras, cholerine, or gastroenteritis; diphtheria; measles; plague, human; plague, rodent; poliomyelitis (acute anterior poliomyelitis or infantile paralysis); scarlet fever;

smallpox; tuberculosis; typhoid fever (enteric fever, typhus abdominalis); typhus fever (typhus exanthematicus); and yellow fever.

In cases where there is an outbreak of plague, cholera, yellow fever, or typhus fever in his territory the consul promptly cables this information, instead of mailing it. Owing to this method of transmitting information it occasionally happens that a ship which has left a foreign port before one of these outbreaks reaches an American port in ignorance of the fact, and the master of the ship gets his information concerning the disease from the American health authorities.

Cholera, plague, yellow fever, typhus, smallpox, leprosy, and anthrax are classified as quarantinable diseases. This means that when a ship reaches port from an area in which there has been an outbreak of one of them, or with a case of one of these diseases on board, there are special measures of disinfection and segregation which are taken to prevent any spread of the contagion or infection in the United States.

Reports from consular officials abroad are the principal sources upon which the Public Health Service depends for what may be distinguished as its current information on world health conditions. In addition, however, the service receives all of the bulletins and other documents issued by the health section of the League of Nations, the International Hygiene Office in Paris, and similar agencies. Most of these, of course, are at least a month old when they reach the United States, but they are valuable records for statistical purposes.

The United States has what is called sanitary treaties with all of the important nations of the world (International Sanitary Convention of Paris), as well as a regional agreement with Pan American countries (Pan American Sanitary Code). These sanitary agreements, which have the force of treaties, provide for an international exchange of information relating to public health. This means that all of the nations of Central and South America receive regularly all the data on public health gathered by the world-wide information system of the United States, this information being cabled in case of emergency conditions. This is of immense value to some of the small States which do not have their own facilities for such purposes. This activity at the present time is largely an "export" business so far as the United States is concerned, but from some countries reciprocal reports of great value are received.

In the domestic field the Public Health Service is kept informed of conditions by weekly reports mailed in from local health officials in 570 cities of 10,000 or more population. These reports cover the prevalence for their respective territories of the following diseases: Chicken pox, diphtheria (carriers not included), influenza, measles, mumps, pneumonia (all forms), scarlet fever, smallpox, tuberculosis (all forms), typhoid fever, whooping cough, cerebrospinal fever,

dengue, lethargic encephalitis, pellagra, poliomyelitis (infantile paralysis), rabies (in man) (developed cases), rabies (in animals), typhus fever.

The local officials who send in these reports are classified as "collaborating epidemiologists" of the Public Health Service and are paid $1 a year. Their reports are mailed under Government "frank" upon cards provided for that purpose

In addition to the reports mailed in each week from the 570 cities, the service also receives weekly telegraphic reports from health officials of the various States

These reports from city and State officials and from the consular officers abroad constitute the basis of the information contained in PUBLIC HEALTH REPORTS, which is issued weekly by the Public Health Service and sent to nearly 10,000 public health officials, sanitariums, libraries, and institutions throughout this country and abroad.

The reports, beside tabular statements of domestic and foreign conditions indicating the state of public health, contain special articles on various phases of public health work and summaries of current works on sanitary engineering, as well as abstracts of current court decisions affecting public health work. It may be remarked here that the experience of many years indicates that the courts in nearly every instance apply the tests of common sense and reasonableness to acts of public health officials which come before the courts for review.

When there has been an outbreak of some particular disease necessitating special measures by the service, in cooperation with city and State health officials, it is the practice to include in the PUBLIC HEALTH REPORTS an account of these activities.

The editing and distribution of PUBLIC HEALTH REPORTS is one of the functions of the Division of Sanitary Reports and Statistics.

It may be asked, Of what use is all of this statistical and other information? Some may doubt the value of informing a public health official in California of an epidemic of influenza in Massachusetts. But it is axiomatic in public health work that disease can not be prevented unless the health officials know where, when, and under what circumstances communicable diseases occur

The value of reports of this kind was strikingly demonstrated during the influenza epidemic a few years ago. The epidemic originated, so far as the United States is concerned, in Boston and spread westward across the country. It was found that public health officials in touch with the situation could predict almost to the day when cases of this disease would be reported in the Middle Western and Western States along the line of march of the "flu" bacillus. And

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to be forewarned of epidemics of this character is more than half the battle of combating them.

The Division of Sanitary Reports and Statistics was the first organization to take up the idea of radio broadcasting of talks on health topics on a large scale. These talks are prepared by medical officers of the service and are broadcast from the naval station at Arlington. Multigraphed copies are sent to other broadcasting stations throughout the country, and frequently they are "put on the air" by these stations.

Another function of the division is handling the vast number of requests for literature and information on health topics which pour into the Public Health Service The service now has nearly 2,000 publications which may be sent in reply to such requests. When a request comes in for information not given in any of these publications, an effort is made to refer the inquirer to sources from which he can obtain what he desires. Frequently inquiries on subjects falling within the scope of other agencies of the Government are referred to those offices for reply. Likewise it happens quite often that other departments and bureaus receive requests for information which can be supplied by the Public Health Service. A regular system of interchange of such requests has been worked out. In the course of the last fiscal year ending June 30, 1926, a total of approximately 380,000 copies of publications was sent and individual replies made in response to requests for information.

Division of Personnel and Accounts

Every organization which operates over a wide geographic area needs a central control office, a nerve center, so to speak, which directs the movements of the distant members. So the United States Public Health Service, which has the earth and the air above and the waters, if any, underneath the earth, for its sphere of activity, has a dispatcher's office in the guise of its Division of Personnel and Accounts. It is through this division that each of the more than 8,000 men and women who comprise the personnel of the service came into the organization; and it is through this office that these same men and women are moved about in the great game which the Public Health Service plays with disease as its opponent and the world as its chess board.

Being a mobile organization and required to meet public health emergencies, the Public Health Service is organized and conducted under strict disciplinary rules. This necessitates adequate central control and means to attend to the mechanics of movements and other matters affecting personnel. In fact, there must be some specific office charged with the keeping of records of appointments, promotions, discontinuances, leaves of absence, changes of station,

and maintenance of discipline in accordance with the laws and regulations on the subject It is the Division of Personnel and Accounts which does all these things for the Public Health Service. In addition the division looks after the preparation of estimates of appropriations to carry on activities, recommends apportionments of appropriations in conformity with law, makes allotments to conduct the several activities, and maintains records of all finances and expenditures, including an elaborate system of cost accounting for the manifold operations of the Public Health Service.

The addition of new laws relating to accounting and to reclassification and retirement of employees renders these records essential to the proper administration of public health activities Moreover, the Division of Personnel and Accounts is the property office of the Public Health Service. Every article which the service uses, from a laboratory microscope to a hospital ambulance, must be properly accounted for from the time it is purchased until it is worn out and condemned. It is through this division that all records of property and supplies are maintained and surplus supplies at one station distributed to other stations as may be needed.

If any function of the division is more important than the others it is the recruiting and giving commissioned personnel opportunity for experience in the larger duties they will be called upon later to perform. It was this training and experience that enabled officers of the Public Health Service to make investigations of far-reaching importance By this means, light was thrown on the transmission of yellow fever, the cause of hookworm disease in America was discovered, and tularæmia, a disease peculiar to America, was identified and its method of transmission established Moreover, through experience, officers are able to engage in highly technical investigations affecting the public health. A candidate for appointment in the regular corps is required to pass a thorough examination before a board of medical officers. These examinations are held at intervals in various large cities of the United States for those candidates who, after application, have been invited by the Surgeon General to participate. The examinations consist of oral, written, and laboratory tests necessary to determine the candidate's mental and physical aptitude, as well as professional attainments. The service makes no allowance for the expenses of candidates appearing for examination.

Applicants must be between the ages of 23 and 32, citizens of the United States, graduates of a reputable medical college, and must have served an interneship in an approved hospital for one year, or have practiced medicine for two years. An average of 80 per cent in all branches is required for admission to the service. Appointments are made by the President on recommendation of the Surgeon

General and subject to confirmation by the Senate. When this confirmation has been given, the candidates become assistant surgeons and are assigned to duty.

At this point in the career of the young Public Health Service officer it becomes the duty of the Division of Personnel and Accounts to see to it that he is given such assignments as will provide him with a well-balanced experience, necessary to the solution of larger problems while he remains in the service. So far as practicable, during the first four years he is in the service, the young officer is detailed for duty at a marine hospital, a quarantine station, an immigration station, Hygienic Laboratory, and in public health work in the field, in the order named.

The length of time the officer spends on each detail depends upon his previous training and the exigencies of the service. Where possible and within limits, consideration is given to the preference of the individual officer.

After four years' commissioned service, an assistant surgeon is eligible for promotion, after examination, to the grade of passed assistant surgeon. Passed assistant surgeons after 12 years' commissioned service may be promoted to the grade of surgeon. Promotions to the grades of senior surgeon and Assistant Surgeon General are made as vacancies occur by promotion of the ranking surgeon or senior surgeon, respectively. Before such promotions are made, the officer is required to pass a physical examination, and his record is reviewed by a board of officers.

The pay of commissioned officers of the Public Health Service ranges from $2,699 for an assistant surgeon to $7,179 for an Assistant Surgeon General, both without dependents. For officers having dependents, the salary range is $3,158 to $7,200. A Surgeon General receives $7,500 if he has dependents, and $7,179 if he has none. These salaries are established by the same law which fixes those of officers of the Army and the Navy. The grades are comparable to those of medical officers of the Army and Navy. Advances in pay in higher grades are dependent, however, upon length of service rather than promotion in rank. By reason of legislative restrictions of long standing, promotions in the higher grades are almost negligible.

All other personnel of the Public Health Service is selected from lists of eligibles established by the Civil Service Commission under civil service law and regulations. The diverse system of appointment sometimes presents difficulties when men of special scientific attainments are required for specific work involving change of station. It would be highly desirable from the standpoint of the Public Health Service if all medical and scientific personnel subject to emergency and liable to changes of station were selected in the same manner as the commissioned officers. The adoption of this policy would pro-

mote scientific investigations and be in the interest of efficient administration.

For administrative purposes the Public Health Service divides the country into six sanitary districts with a medical director assigned to each district. Through these directors the Surgeon General keeps in touch with State and local health authorities, universities, industries, and other interests favorably affected by public health work. These directors also make inspections of service stations and activities with a view to their coordination, investigate administrative difficulties, and devise means for the prevention and suppression of epidemics liable to occur within their districts. The ordinary routine of stations is handled by the officers in charge. The district directors accordingly act largely in an advisory capacity without the necessity of considerable personnel.

The present is an age of specialization, particularly in the field of medicine, and thus it happens that within the service there are groups of officers having special qualifications for solving particular problems. Some of these officers may be devoting their time regularly to investigations of communicable diseases, nutritional diseases, the health hazards of industry, or other public health problems. But when an emergency arises in any district, selection and detail of personnel must be made to meet it In such cases the Division of Personnel and Accounts is the channel through which the Surgeon General transmits his orders. All epidemic situations are met in this manner. These movements of personnel are limited as much as possible, however, by the policy of having officers with all-round training distributed here and there so as to meet emergency situations as they arise.

During the fiscal year ended June 30, 1926, there were many extra routine demands upon the Public Health Service for the services of specialized personnel. There was the extension of the immigration inspection work to European ports, the fight against the spread of bubonic plague in California, the tetraethyl lead investigation, the investigation of the shellfish industry, investigations and administration of methods to safeguard milk supplies, and advisory work with the Office of Indian Affairs. All of these demands required the selection and disposition of qualified personnel.

In addition, there are constant demands from private and semipublic organizations for assistance and instruction in public health matters. Officers are detailed, therefore, to attend meetings of associations for the promotion of public health. It is the policy of the service to supply speakers wherever possible and where the importance of the occasion merits, for the dissemination of public health information and to cooperate with and aid State and local authorities in the solution of public health problems which arise in connection with

administration. It is necessary for some agency to evaluate for the Surgeon General the relative importance of the demands received. This decision devolves largely upon the Division of Personnel and Accounts because of its knowledge of the availability of officers from day to day.

Division of Domestic Quarantine

"Quarantine," by which is meant any forced stoppage of travel, communication, or intercourse on account of contagious or infectious diseases on land or by sea, was probably the earliest known method used to prevent the introduction of disease. Isolation and quarantine, in the sense of holding vessels and people until danger of disease was supposed to have passed, were naturally in use for ages before the actual modes or methods for transmission of communicable disease were known, and during the colonial period each of the colonies had more or less adequate provision for its protection from the introduction of exotic disease from abroad.

When the United States came into being, with its unique system of balance between Federal and State powers, health matters, which are universally regarded as police powers, were, by inference, left to the control of the several States. The control of foreign and interstate communication, however, was, of course, given to the Federal jurisdiction. Among the early laws passed in the first decade after the Constitution were those enjoining Federal officials (Army, revenue cutter, customs, etc.) to assist the several States in the enforcement of their quarantine laws. There were few or no laws other than local providing for the possibility of the interstate spread of disease With the introduction of the railroad and steamboat, with consequent increase in travel and communication, the necessity for coordinated effort was seen, and by consent of the States, and under the commerce clause of the Constitution, laws were passed providing for Federal control both of interstate and maritime quarantine functions.

The Domestic Quarantine Division of the Public Health Service came into being in 1910. Its functions may be summarized as follows:

1 Enforcement of the interstate quarantine regulations of the United States.

2 Development of State departments of health, especially divisions of communicable diseases and sanitary engineering.

3. Control over water supplies used for drinking and culinary purposes on railroads, vessels, and other interstate carriers.

4 Sanitation of the national parks in cooperation with the National Park Service.

5. Measures for the control and prevention of trachoma.

6. Studies of and demonstrations in rural sanitation.

7. The annual conference of State and Territorial health authorities with the Public Health Service.

8. Other contacts with State and Territorial health officials relating to health administration.

Some idea of the extent of the duties imposed upon the division by the requirement that it enforce the interstate quarantine regulations may be gleaned from the first paragraph of these regulations, which reads:

"For the purpose of interstate quarantine the following diseases shall be regarded as contagious and infectious diseases within the meaning of section 3 of the act approved February 15, 1893: Plague, cholera, smallpox, typhus fever, yellow fever, typhoid fever, paratyphoid, dysentery, pulmonary tuberculosis, leprosy, scarlet fever, diphtheria, measles, whooping cough, epidemic cerebrospinal meningitis, anterior poliomyelitis, Rocky Mountain spotted or tick fever, gonorrhea, chancroid, anthrax, influenza, pneumonia, epidemic encephalitis, septic sore throat, rubella, and chicken pox."

And paragraph 2 of the same regulations provides that:

"Any person or thing, either living or dead, which has been unduly exposed to or in intimate contact with or is infected with any of the diseases enumerated in section 1, except as otherwise provided in these regulations, shall be regarded as contagious or infectious until the contrary has been proved, and if found in any car, vessel, vehicle, or conveyance undergoing interstate transportation, shall be subjected to such inspection, disinfection, or other measures as may be necessary to prevent the spread of the infection from them"

It will be appreciated that these regulations impose an undertaking of considerable magnitude upon the Division of Domestic Quarantine The regulations cover almost every conceivable situation which might arise in connection with the travel of persons suffering from communicable diseases and the travel of things subject to infection. Provision is also made for the sanitation of interstate common carriers and for the supervision of drinking water and food supplies used on such carriers.

One of the activities of the Public Health Service in connection with interstate travel is the sanitary control over all water supplies used for drinking or culinary purposes on interstate carriers. It is obvious that this is a tremendous task. The water included in this description comes from more than 2,800 sources. Control over this supply from a sanitary standpoint is practicable only because of the cooperation given the Public Health Service by the State and city health authorities. There are many indirect results from this function of the Public Health Service. It has been found that when the water supply of a certain city has been adjudged unfit for use on trains in interstate traffic, these cities are usually quick to

improve their water supply. The local citizenry is prone to feel, and quite properly, that what is not good enough for the traveler passing through their city is not good enough for the home folks.

Sanitation in the national park reservations is a most important phase of the work of the Domestic Quarantine Division. Tourists from every State in the Union visit these parks each year, and if proper precautions were not taken the parks might easily become national focal points of disease distribution. Disposal of sewage and protection of water supplies are the principal subjects with which the public-health officials have to deal in the national parks.

The suppression of epidemics naturally falls within the jurisdiction of the Domestic Quarantine Division. An outbreak of bubonic plague at Los Angeles, Calif., in recent years was suppressed by an active campaign against rodents combined with extensive rat proofing of buildings and the elimination of rat harborages. Similar steps against the same disease have been effective at San Francisco, Oakland, Calif.; New Orleans; Pensacola; Galveston and Beaumont, Tex. The ground squirrels of California have been found to be carriers of the disease, and squirrel-free zones have been maintained around certain ports to prevent the infected squirrels from coming in contact with city rats and causing an extensive plague infection—first of the rats, and later of human beings.

It was the Division of Domestic Quarantine which directed the investigation of the shellfish industry during the past year following upon an outbreak of typhoid fever attributable to infected oysters. The investigation resulted in the adoption of methods to prevent infection of the oysters through cooperation with the shellfish industry and State health authorities.

Rural sanitation is a subject in the development of which the Public Health Service takes an active interest through studies and demonstration work. The counties have been encouraged to work in this field in the past through allotments from Federal funds. The local communities now spend about $9 for this work for every dollar contributed by the Federal Government. Demonstration projects in which the division is now participating include: General sanitation, child and maternity hygiene, tuberculosis control, acute communicable disease control, and school hygiene.

For the fiscal year ending June 30, 1926, the appropriations for the work of the Domestic Quarantine Division totaled approximately $450,000.

Division of Venereal Diseases

Back in 1911 the Public Health Service wanted to do something which, it hoped, would bring about a reduction in the prevalence of venereal diseases among the patients in the marine hospitals. At

that time—and for that matter to-day—about 22 per cent of the work of the marine hospitals had and has to do with venereal infections of one kind or another

So, in 1911, the Public Health Service prepared a booklet containing the facts then known about venereal diseases, stated in plain and simple language The intention was to distribute the booklet among the seamen and others who were cared for in the marine hospitals.

The booklet was sent to the Treasury Department for approval and was promptly sent back with a message that it contained matter which was indecent and improper for the Government to print. And that attitude was sustained by higher officials and the booklet was not printed

However, as far back as 1875 the problem of venereal diseases, their prevention and control, was considered by the United States Public Health Service The annual report for 1875 contained a number of recommendations for the prevention of the introduction of syphilis and gonorrhea into the United States, and suggestions for the treatment of those already infected, which are as germane to the problem to-day as they were at that time "If these regulations were adopted," the report states, "a better sanitary as well as moral state of society would prevail generally."

Nearly 40 years elapsed before the medical and quarantine measures recommended by the service for the control of these diseases had been adopted generally in the United States.

Ehrlich discovered salvarsan in 1910, which discovery, more than any other one thing, resulted in tangible and effective measures for the control of syphilis. The Public Health Service secured the first shipment of this drug to the United States and cooperated in its first administration in this country.

The World War brought the country to a state of mind in which it was willing to look reality in the face, and the Government assumed its share of responsibility of informing the public frankly concerning the nature and prevention of venereal diseases and in applying medical and other measures of control.

Early in the war the Public Health Service participated with other agencies in a campaign for the protection of the armed forces undergoing training at the various cantonments On January 2, 1918, active steps were taken for the official organization of a plan for the nation-wide control of these diseases. Overtures were made to each of the State boards of health for the purpose of enlisting the forces of these organizations. The responses were very encouraging, and by May 24, 1918, 32 States had undertaken systematic efforts to control the spread of venereal infections.

A more concerted effort for the control of these diseases was made possible by an executive order of July 1, 1918, which placed all

Federal health activities other than those of the Army and Navy under the supervision and control of the Public Health Service. On July 9 Congress passed the Chamberlain-Kahn Act creating in the Public Health Service a Division of Venereal Diseases, and appropriating more than $4,000,000 for use during the two following fiscal years to carry out the duties imposed by this act Under the provisions of this act the functions of the division are as follows:

(1) To study and investigate the cause, treatment, and prevention of venereal diseases.

(2) To cooperate with State boards or departments of health for the prevention and control of such diseases within the States, and

(3) To control and prevent the spread of these diseases in interstate traffic.

A tremendous impetus was given to venereal-disease control work as a result of the interest and leadership of the Public Health Service in this movement. During the first 12 months after the passage of this act every State in the Union except four was prosecuting vigorous measures for the control of venereal diseases in accordance with the cooperative plan outlined by the Public Health Service, and at the present time all States are conducting venereal-disease control programs.

It is interesting to compare the attitude of the Government toward venereal-disease control work in 1919 with that of 1911. As a part of the educational work carried on by the Division of Venereal Diseases the country in 1919 was being furnished with millions of educational pamphlets and informational bulletins far more frank in their treatment of the serious subject of venereal diseases than the modest booklet suggested in 1911, which had been deemed indecent and improper for the Government to publish.

In this cooperative endeavor medical, educational, and law-enforcement activities were featured. An important feature in the control of venereal diseases has been the provision of facilities for the treatment of indigent persons suffering from these diseases as the best means of preventing their future spread. More than 900 cooperative clinics have been established by States, counties, cities, and institutions where treatment is given free or at a nominal charge. A total of 915,638 patients has been admitted and 13,835,321 treatments have been given at these clinics.

These clinics have, since 1918, made 1,959,446 Wassermann tests and 1,409,089 microscopic examinations for gonoccocus infection. Nearly every State board of health provides laboratory facilities to aid the physicians in diagnosing these diseases.

Many cases affected with a venereal disease never seek treatment by a physician, and all physicians do not report cases under their

care, but 2,800,000 cases of venereal diseases have been reported to State health departments during the past eight years

One of the most valuable phases of modern public-health effort has been the educational campaign in its attack on venereal diseases. The history of measures for the control of no other disease reveals that public enlightenment has proceeded so rapidly, with the result that a wholesome attitude toward matters of sex is being developed.

The educational work may be divided into two groups—general public educational work and a specific program of sex education to be carried on in schools and colleges As a part of the educational program the service has prepared more than 100 different publications, and over 30,000,000 copies of such publications have been distributed. Seven card exhibits for use in public gatherings have been prepared and widely used Stereopticon slides and posters have been prepared and displayed. In cooperation with State boards of health arrangements have been made to send lecturers to speak before many audiences, giving them essential information on the nature of venereal diseases and methods of their prevention and control.

To encourage the program of sex education in the schools the service has prepared bulletins giving outlines of courses, exhibits stressing physical fitness, and a 12-reel motion-picture film depicting the story of the reproduction of life, the prevention of disease, and rules of personal hygiene.

Sex education includes not only instruction concerning the reproductive function but all teaching and training in the home, church, and school which tends to form normal and wholesome attitudes and ideals in regard to sex and to shape character and conduct in accordance with such attitudes and ideals.

Several studies have been made of the status of sex education in schools. The last one, in 1925, showed that remarkable progress has been made in the inclusion of approved methods of sex education.

A successful effort has been made to secure essentially uniform laws throughout the United States concerning the control of venereal diseases. All States now require these diseases to be reported and control measures are applied in a manner similar to other contagions. Under certain conditions cases which continue to spread the disease are quarantined.

Most States have laws forbidding the sale of "quack" remedies for venereal treatment. Uniform laws and ordinances have been adopted governing the control of prostitution and making the transmission of venereal diseases a crime. These laws, however, should be enforced in a more satisfactory manner.

The study of the cause, treatment methods, and the prevention of venereal diseases has occupied the attention of the Division of

Venereal Diseases. Various investigations have been made which have been of great value in promoting more effective measures of prevention and control.

Investigations have been made of venereal-disease prevalence among various groups of persons as regards sources of infection, age, and other factors. It is interesting to note that a considerable proportion of these diseases, particularly syphilis, are acquired innocently.

The division also serves as a clearing house of knowledge regarding methods of venereal-disease control in foreign countries Information gathered by officers of the Public Health Service is made available to the health officials of the States and to others interested.

Some of these reports from abroad are quite significant In Denmark, for example, where for 116 years the Government has required all persons infected with a venereal disease to submit to treatment supplied free by the Government, it has been found that syphilis has decreased by approximately 33 per cent in the past quarter century. Gonorrhea also showed a decline during that period, though the fall was not so great.

In order to provide facilities for the study of practical problems connected with clinic management, methods of treatment and prevention, the Public Health Service in 1920 established in cooperation with the Interior Department a clinic at the Hot Springs National Park. At this clinic various new drugs have been given practical tests to determine their relative efficacy in producing a cure, and much practical knowledge concerning clinic management has been gained, and this information has been given to the State venereal disease-control officers.

Owing to the reduction in the appropriations for the division, which for the present year amount to $75,000, the venereal-control activities have been considerably curtailed. Since the fiscal year 1925 no funds have been available for allotment to States for cooperative work. As a result, considerable decrease in the activity of many of the States is noticed, although a fair proportion of them are carrying on an active venereal disease-control program.

The following figures indicate the extent and importance of the work of the Division of Venereal Diseases: For the fiscal year 1925 the service received reports of 200,584 cases of syphilis, 165,523 cases of gonorrhea, and 6,706 cases of chancroid. For the fiscal year 1926 reports from the same sources were: Syphilis, 215,547; gonorrhea, 166,656; and chancroid, 7,129. In 1925, 495 clinics reported 62,543 admissions for syphilis, 39,636 for gonorrhea, and 2,843 for chancroid infections. The encouraging factor in the situation is the increased interest which has been aroused among State and local authorities and the public in general. The nature of the diseases makes it certain that the battle will be a long one.

PUBLIC HEALTH ENGINEERING ABSTRACTS

The Destruction of Rat Fleas by Heat on Board Ship.—R. K Shaw, J. Roy. Nav. M. Serv., 1925, v. 11, 255–60 (3 refs). (Abstracted by M. E. Delafield.) From *Bulletin of Hygiene*, vol. 1, No. 2, February 1926, p. 159.

"This investigation was conducted on board H. M S *Endeavour* off the West Coast of Africa with a view to discovering a convenient and certain emergency method of destroying rat fleas in clothing and bedding Seven experiments on about 60 rat fleas were performed. The fleas were placed between blankets or on their surface and exposed to a hot atmosphere, the site in most cases being the engine room, port side, over the water-feed tank. The results indicate that all rat fleas are destroyed in a dry blanket, if folded not more than twice, by exposure to 110° F. for three hours, such a temperature being constantly present in this engine room while at sea. The fleas were found, however, to withstand a high temperature for a prolonged period if kept moist.

"This method of killing fleas has proved to be of practical value in such a ship as the *Endeavour*"

Antimalarial Operations on the Eastern Bengal Railway—Khulna Branch., T. H. Bishop, chief medical officer, Eastern Bengal Railway, Calcutta. *Indian Medical Gazette*, vol. 61, No. 7, July, 1926, pp 337–343. (Abstract by J. A. Le Prince.)

The author thinks three factors should be considered in antimalaria operations by railways: (1) Results achieved may be in part reduced in value by adjacent conditions close to railroad premises; (2) by the large infective focus or group that harbor malaria parasites and feed the mosquito carrier; (3) and by the group of persons who by careless habits allow themselves to be infected.

He considers the antimalaria campaign instituted by the St. Louis Southwestern Railway of the United States as the most successful disease-prevention campaign (after the Panama Zone control) where the mosquito factor was considered, and that a somewhat similar campaign might be possible and might yield good results along the Eastern Bengal Railway.

The campaign conducted included 29 stations, was in charge of four traveling medical officers who visited each family in railway quarters once weekly, made necessary examinations, and so far as possible saw that the course of treatment laid down was carried out. In the families of employees Indian nurses were provided.

Each medical party consisted of a medical graduate, an Indian nurse, and an instructional sanitary "Jamador" to point out things that could be done on a small scale, such as control of small nearby Anopheles sources, cleaning undergrowth, removing garbage, etc.

Of the railway population of the Khulna branch, 2,000 persons, 38 per cent, were treated for malaria by the visiting medical officers. In a single season, of 514 cases of primary malaria 306 were apparently cured and 208 were relapses or reinfections.

The writer thinks that night duty and lack of regular diet are important factors in increasing susceptibility to malaria The percentage of malaria cases to population at 29 stations on the Khulna branch varies from 18 to 68 per cent, but where station forces are small one case gives a high percentage rate. The stations are frequently located close to swamps, and Anopheles-producing borrow-pits close to them are common.

It is proposed to continue the "propaganda-with-treatment" campaign.

The writer advises railway administrators to consider the effect on health of man-made topographical changes near stations, to consider the future health status of employees in connection with location of sites for stations, quarters, offices, etc. He advises against the dumping camps of newly imported labor in midst of a railway colony and against drainage operations being so carried out as to increase the Anopheles output in place of decreasing it

(*Abstractor's comment.*—A survey made at Panama during the canal-construction period showed that the forces working on night shifts had a lower malaria rate than that of the dayworking forces. The writer states that in the work of the St Louis Southwestern Railway in the United States a large special staff and adequate funds were available and the campaign was designed as a cooperative measure between the railway and the adjacent municipalities During the first year of the American railway work only $3,000 was available. These funds were so used as to demonstrate to a number of municipalities that it would pay them a handsome financial return to cooperate with the efforts of the railroad The railroad was losing potential profits because of malaria prevalence. It therefore invested each dollar so as to get that dollar back several times each year forever after the work had advanced, and it accomplished its objective. While it is not known how many thousands of dollars per year the Eastern Bengal Railway is losing because of malaria prevalence, yet the abstractor (who initiated the first work done by the St. Louis Southwestern Railway and selected the worst malaria section to start the demonstration in, with a view to proving to the railroad executives that malaria control means increased railroad revenue) feels sure that properly directed malaria control, including preliminary emergency control measures not mentioned by the writer, may be as important to the Eastern Bengal Railway and many other railways in the British colonies in the Tropics as is the upkeep of track and rolling stock. It is to be hoped

that the directors and executives of more British and more American railroads will before long investigate their present unnecessary annual financial loss caused by malaria, and thus obtain that worth-while increased income which is within their reach but yet ignored by them. The total amount spent to date by the St Louis Southwestern Railway for malaria control as compared with the profits gained by increased efficiency of its employees, by increased freight handled, and increased development of its territory is a relatively small amount. Its investments in malaria control are decreasing, while its income from the territory sanitated is increasing.)

Cresol Saponified as a Larvicide. C Strickland, professor medical entomology, School Tropical Medicine and Hygiene, Calcutta, and D. N Roy, assistant professor medical entomology, in the same institution (Including a note on the cresols by Maj. A D. Stewart)' *Journal Royal Army Medical Corps*, vol 46, No 3, September, 1926, pp 188–195. (Abstract by M A Barber)

Varying dilutions of saponified cresol in water were applied to *Anopheles rossi* and to *Stegomyia* and other culicines. In a dilution of 1 in 10 by 5 all larvæ were killed in 42 hours, but in a dilution of 1 in 10 only about 15 per cent died in 24 hours. Toxicity is less marked in dilutions made in polluted river waters. *Anophelines* are more resistant to this larvicide than stegomyia and culicines, and pupæ more resistant than larvæ. Fish and shrimps were relatively much more affected than larvæ. Dilutions of saponified cresol rapidly lose their efficacy. In field trials the authors found a dilution of 1 in 50,000 the greatest of any utility, and this would represent a relatively prohibitive cost. Major Stewart's note summarized: The germicidal coefficient of a coal-tar disinfectant is no sure guide to its larvicidal value; and the proportionate amount and nature of its constituents have to be considered in gauging its larvicidal power, the hydrocarbon oils probably play a much larger part than might be thought, in comparison with the phenoloids; the comparative larvicidal power of the "phenoloid" series has apparently not been determined as has the germicidal power; the composition of the diluting water is of importance.

Larvicidal Action of Cresol. Maj. C. H. Harold, Royal Army Medical Corps. *Journal Royal Army Medical Corps*, vol. 46, No. 3, September, 1926, pp. 180–187. (Abstract by M. A. Barber.)

The larvicidal as well as the germicidal efficiency of the cresol tested is enhanced by increase of temperature; by the presence of acid, although in excess of the amounts of acid obtaining in nature; and by the presence of common salt. However, a cresol may be highly germicidal but a relatively poor larvicide. A cresol may produce torpor in a mosquito larva which may appear to be dead, but will subsequently revive, especially if left on the surface of

water or otherwise well aerated. Exposure to nonlethal solutions of cresol may increase the resistance of larvæ to solutions ordinarily lethal. The presence of organic silt lining a pool may retard the action of cresol on larvæ

The author tested the effect of cresol on the culicine *A punctor* and on *Anopheles bifurcatus*. Pupæ were more resistant than larvæ to the cresols tested and the anophelines more resistant than the culicines. A cresol tested in the presence of organic silt was effective against the culicine in a 1 in 20,000 dilution and against the anopheline in a 1 in 10,000 dilution

Design of Small Sewage Disposal Plants. F Johnstone Taylor, consulting engineer, Warrington, England. *Canadian Engineer*, vol. 51, No. 11, September 14, 1926, pp. 285–287 (Abstract by Rudolph E. Thompson.)

Description and discussion of sewage disposal systems for individual houses or institutions. Suitable designs of septic tanks and of contact beds and percolating filters for treatment of septic-tank effluents are described and illustrated. The importance of simplicity in design is emphasized.

Developments in Methods of Sewage Disposal. C. G. Gillespie, director, bureau of sanitary engineering, California State Board of Health. *Pacific Municipalities*, vol. 40, No. 8, August, 1926, pp 303–317. (Abstract by C. G. Gillespie.)

The article is a rather nontechnical review of the evolution of sewage treatment from its beginning in England about 70 years ago. A point stressed is the great need of deeper understanding of the scientific use of the lower flora and fauna in sewage treatment and the achievements of the present due to the bit of knowledge now possessed. Considerable space is devoted to the rapid development of the activated sludge method and its success and suitability to California conditions because of potential freedom from odors and the need of irrigation water which it can supply, and production of an excellent fertilizer. There are now three good-sized activated sludge plants in California: Lodi, population 8,000, uses ridge and furrow aeration with sludge dried on soil beds; Pasadena, population 100,000, ridge and furrow aeration, now buries sludge filtered on an Oliver filter, but is about to dry it by direct heat driers; Pomona, population 20,000, uses the Manchester type of aeration with anaerobic digestion of sludge in the Imhoff tank ahead of the aerators.

Report of the Bureau of Uncinariasis of the Department of Health, 1924–25. *Porto Rico Health Review*, vol. 1, No. 10, April, 1926, pp. 29–38. (Abstract by D. L. Augustine.)

The bureau of uncinariasis was created in 1923 to take charge of the increasingly important work of prevention and treatment of

uncinariasis The work of the bureau consists largely in sanitation to prevent infection and in giving treatments for the cure of the disease During the year 22,408 latrines were approved, and it is now estimated that over one-fourth of the total rural population is provided with sanitary accommodations During the year 36,239 rural inhabitants were examined, of which over 90 per cent were found infected with hookworms; 139,585 treatments were given to 38,269 persons, most of whom were freed of their parasites.

The work of the bureau is divided into three principal phases: (1) Sanitation, (2) conservation, and (3) treatment

Observations on the Development of Hookworm Larvæ. P. R. Maplestone *Annals of Tropical Medicine and Parasitology*, vol. 20, No. 2, June, 1924, pp 167–173 (Abstract by D L Augustine)

A series of experiments shows that urine has a definite effect in destroying both hookworm eggs and freshly hatched larvæ The eggs are killed in urine after 9 to 14 days. It was found that 4 days' complete immersion in water kills about 25 per cent of a given number of hookworm eggs and that a steady diminution occurs in the number of viable eggs recoverable from water as immersion is continued After a period of five weeks' immersion all the eggs appear to be dead From these observations it seems safe to conclude that septic tanks would have some effect in reducing hookworm infection, the actual reduction being directly dependent on the time the feces remained in the tank.

DEATHS DURING WEEK ENDED NOVEMBER 27, 1926

Summary of information received by telegraph from industrial insurance companies for week ended November 27, 1926, and corresponding week of 1925. (From the Weekly Health Index, December 2, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended November 27, 1926	Corresponding week, 1925
Policies in force	66, 126, 032	62, 247, 321
Number of death claims	10, 451	10, 192
Death claims per 1,000 policies in force, annual rate	8. 2	8. 5

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Deaths from all causes in certain large cities of the United States during the week ended November 27, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, December 2, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Nov 27, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Nov 27, 1926[2]
	Total deaths	Death rate[1]		Week ended Nov 27, 1926	Corresponding week, 1925	
Total (66 cities)	6,726	12.1	12.0	707	671	[3] 58
Akron	29			7	4	75
Albany[4]	31	13.6	11.9	4	4	83
Atlanta	65			8	12	
White	31			4	10	
Colored	34	(5)		4	2	
Baltimore[4]	214	13.8	12.6	32	19	98
White	165			25	11	94
Colored	49	(5)		7	8	112
Birmingham	83	20.5	17.7	9	16	
White	34			3	5	
Colored	49	(5)		6	11	
Boston	228	15.1	13.8	35	23	98
Bridgeport	24			1	3	17
Buffalo	151	14.5	11.4	15	8	63
Cambridge	22	9.4	13.1	2	5	36
Camden	27	10.7	10.5	4	1	67
Canton	21	10.0	11.8	3	1	66
Chicago[4]	634	10.8	10.6	68	59	59
Cincinnati	148	18.8	12.2	13	7	81
Cleveland	188	10.2	12.1	17	29	44
Columbus	73	13.4	12.8	5	3	47
Dallas	47	12.1	10.5	6	4	
White	37			6	2	
Colored	10	(5)		0	2	
Dayton	43	12.7	11.5	2	1	33
Denver	76	13.9	14.1	5	10	
Des Moines	35	12.5	12.2	3	2	50
Detroit	280	11.3	11.0	55	44	90
Duluth	22	10.2	13.2	1	3	23
El Paso	32	15.3	14.9	6	4	
Erie	31			9	2	176
Fall River[4]	28	11.1	10.9	1	10	16
Flint	22	8.4	10.8	4	2	68
Fort Worth	42	13.8	6.1	10	0	
White	33			8	0	
Colored	9	(5)		2	0	
Grand Rapids	27	9.0	10.5	1	5	14
Houston	43			7	5	
White	32			3	4	
Colored	11	(5)		4	1	
Indianapolis	88	12.5	12.9	1	3	8
White	74			1		9
Colored	14	(5)		0		0
Jersey City	61	10.0	14.4	9	12	48
Kansas City, Kans	36	16.0	13.0	2	8	[illegible]
White	26			2	3	[illegible]
Colored	10	(5)		0	5	0
Kansas City, Mo	84	11.7	13.9	7	5	
Los Angeles	250			28	21	78
Louisville	79	13.2	13.1	6	10	51
White	60			4	8	30
Colored	19	(5)		2	2	140
Lowell	21			3	6	58
Lynn	23	11.5	15.7	1	2	26
Memphis	52	15.3	16.1	7	6	
White	26			3	2	
Colored	26	(5)		4	4	
Milwaukee	89	9.0	9.4	6	13	28
Minneapolis	95	11.4	11.0	0	9	0

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in registration area for births.
[3] Data for 64 cities.
[4] Deaths for week ended Friday, Nov 26, 1926
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15, Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans , 14; Louisville, 17; Memphis, 38; Nashville, 30, New Orleans, 26; Norfolk, 38; Richmond, 32; and Washington, D. C., 25.

Deaths from all causes in certain large cities of the United States during the week ended November 27, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Nov 27, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Nov 27, 1926
	Total deaths	Death rate		Week ended Nov 27, 1926	Corresponding week, 1925	
Nashville [4]	63	24 0	13 8	7	1	----------
White	34	----------	----------	2	1	----------
Colored	29	([5])	----------	5	0	----------
New Bedford	22	----------	----------	4	0	69
New Haven	42	12.0	12 8	4	4	55
New Orleans	160	19 9	16 6	13	14	----------
White	99	----------	----------	5	11	----------
Colored	61	([5])	----------	8	3	----------
New York	1, 250	11 0	11 7	129	141	52
Bronx Borough	147	8 5	9 4	16	11	53
Brooklyn Borough	439	10 2	10 2	55	52	56
Manhattan Borough	520	14 4	16.2	43	61	48
Queens Borough	108	7 4	6 7	11	11	50
Richmond Borough	36	13.1	11 7	4	6	70
Newark, N J	82	9 3	9 7	12	12	58
Norfolk	31	9.3	10 8	1	4	20
White	16	----------	----------	0	2	0
Colored	15	([5])	----------	1	2	53
Oakland	59	11 8	8 2	6	3	70
Oklahoma City	26	----------	----------	2	3	----------
Omaha	57	13 8	11.8	6	2	64
Paterson	23	8 4	12.1	3	5	51
Philadelphia	443	11 5	10 9	50	34	67
Pittsburgh	135	11 1	14 4	22	13	73
Portland, Oreg	69	----------	----------	1	2	10
Providence	62	11 8	13 0	7	8	58
Richmond	54	14.9	16 5	4	5	50
White	28	----------	----------	3	3	58
Colored	26	([5])	----------	1	2	35
Rochester	66	10 7	11 0	3	2	24
St Louis	233	14 6	13 3	26	12	----------
St Paul	59	12 4	11 0	2	3	18
Salt Lake City [4]	29	11 4	12.7	5	0	76
San Antonio	64	16 3	16 3	8	9	----------
San Diego	35	16.6	17 2	1	3	21
San Francisco	144	13 2	12.7	8	7	48
Schenectady	25	14.0	10.7	3	2	86
Seattle	71	----------	----------	6	3	58
Somerville	15	7 8	10.5	2	1	57
Spokane	28	13 4	11.0	4	3	93
Springfield, Mass	38	13.7	15.0	4	6	62
Syracuse	40	11 3	12.3	3	3	38
Tacoma	25	12.3	14.0	0	2	0
Toledo	66	11 7	8.2	4	4	39
Trenton	34	13.2	12.6	3	2	51
Utica	31	15 7	18 0	3	3	68
Washington, D C	126	12 4	12 3	9	14	52
White	80	----------	----------	4	6	33
Colored	46	([5])	----------	5	8	91
Waterbury	18	----------	----------	2	1	47
Wilmington, Del	27	11 4	12.8	2	3	44
Worcester	45	12.2	13 9	6	6	72
Yonkers	24	10 8	7.3	2	2	45
Youngstown	30	12.5	10 4	5	10	63

[4] Deaths for week ended Friday, Nov. 26, 1926

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta, 31, Baltimore, 15, Birmingham, 39, Dallas, 15, Fort Worth, 14, Houston, 25; Indianapolis, 11, Kansas City, Kans , 14, Louisville, 17, Memphis, 38, Nashville, 30, New Orleans, 26, Norfolk 38, Richmond, 32, and Washington, D. C , 25

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended December 4, 1926

ALABAMA

	Cases
Chicken pox	20
Dengue	2
Diphtheria	88
Influenza	33
Malaria	18
Measles	6
Mumps	13
Ophthalmia neonatorum	2
Pellagra	4
Pneumonia	48
Poliomyelitis	2
Scarlet fever	24
Smallpox	11
Trachoma	5
Tuberculosis	32
Typhoid fever	19
Typhus fever	1
Whooping cough	12

ARIZONA

Chicken pox	1
Diphtheria	1
Measles	16
Scarlet fever	10
Trachoma	11
Tuberculosis	41
Typhoid fever	1
Whooping cough	3

ARKANSAS

Cerebrospinal meningitis	1
Chicken pox	29
Diphtheria	8
Hookworm disease	8
Influenza	83
Malaria	64
Measles	3

ARKANSAS—continued

	Cases
Mumps	3
Pellagra	11
Scarlet fever	12
Smallpox	3
Tuberculosis	16
Typhoid fever	21
Whooping cough	18

CALIFORNIA

Cerebrospinal meningitis:	
Oakland	1
Stockton	1
Chicken pox	381
Diphtheria	187
Influenza	22
Lethargic encephalitis:	
Modesto	1
San Joaquin County	1
Susanville	1
Measles	809
Mumps	181
Poliomyelitis:	
Glendale	1
San Luis Obispo County	1
Scarlet fever	217
Smallpox	21
Tuberculosis	197
Typhoid fever	10
Whooping cough	70

COLORADO

Chicken pox	47
Diphtheria	24
German measles	2
Influenza	4
Measles	40

COLORADO—continued

	Cases
Mumps	1
Pneumonia	6
Poliomyelitis	1
Scarlet fever	138
Septic sore throat	2
Smallpox	19
Tuberculosis	13
Typhoid fever	3
Whooping cough	6

CONNECTICUT

Chicken pox	143
Diphtheria	32
German measles	3
Influenza	13
Measles	69
Mumps	9
Pneumonia (broncho)	22
Pneumonia (lobar)	42
Scarlet fever	58
Septic sore throat	3
Tuberculosis (all forms)	35
Whooping cough	33

DELAWARE

Anthrax	2
Chicken pox	5
Diphtheria	3
Pneumonia	2
Scarlet fever	18
Tuberculosis	2
Typhoid fever	2
Whooping cough	3

FLORIDA

Chicken pox	6
Dengue	1
Diphtheria	37
Malaria	4
Measles	2
Mumps	3
Pneumonia	8
Scarlet fever	17
Smallpox	28
Tuberculosis	10
Typhoid fever	19
Whooping cough	2

GEORGIA

Cerebrospinal meningitis	1
Chicken pox	25
Diphtheria	62
Hookworm disease	1
Influenza	65
Malaria	15
Measles	12
Mumps	2
Pneumonia	34
Scarlet fever	17
Septic sore throat	13
Smallpox	20
Tetanus	2
Tuberculosis	4
Typhoid fever	22
Whooping cough	5

IDAHO

	Cases
Chicken pox	34
Measles	33
Pneumonia	1
Scarlet fever	39
Smallpox	7
Trachoma	1
Tuberculosis	1
Whooping cough	42

ILLINOIS

Cerebrospinal meningitis	
Cook County	1
Knox County	1
Chicken pox	656
Diphtheria	142
Influenza	17
Lethargic encephalitis	
Cook County	1
Macon County	1
Measles	408
Mumps	90
Pneumonia	232
Poliomyelitis	
Crawford County	1
Jersey County	1
Lawrence County	1
McHenry County	1
Scarlet fever	293
Smallpox	15
Tuberculosis	291
Typhoid fever	54
Whooping cough	221

INDIANA

Chicken pox	275
Diphtheria	126
Influenza	60
Measles	49
Pneumonia	13
Scarlet fever	212
Smallpox	151
Tuberculosis	42
Typhoid fever	10
Whooping cough	175

IOWA

Chicken pox	59
Diphtheria	30
Measles	19
Mumps	3
Pneumonia	3
Poliomyelitis	2
Scarlet fever	30
Smallpox	15
Tuberculosis	5
Typhoid fever	3
Whooping cough	1

KANSAS

Cerebrospinal meningitis—Ellinwood	1
Chicken pox	202
Diphtheria	38
German measles	2
Influenza	5
Measles	51

KANSAS—continued

	Cases
Mumps	4
Pneumonia	45
Poliomyelitis—Fort Scott	1
Scarlet fever	95
Smallpox—	
Topeka	19
Scattering	7
Tuberculosis	24
Typhoid fever	9
Whooping cough	40

LOUISIANA

Cerebrospinal meningitis	1
Diphtheria	29
Influenza	24
Malaria	16
Measles	29
Pneumonia	32
Scarlet fever	26
Smallpox	1
Tuberculosis	15
Typhoid fever	10

MAINE

Chicken pox	62
Diphtheria	3
Influenza	2
Measles	105
Mumps	1
Pneumonia	11
Scarlet fever	39
Septic sore throat	1
Tuberculosis	6
Typhoid fever	2
Vincent's angina	1
Whooping cough	45

MARYLAND[1]

Cerebrospinal meningitis	1
Chicken pox	178
Diphtheria	58
Dysentery	1
German measles	4
Impetigo contagiosa	2
Influenza	23
Lethargic encephalitis	1
Measles	34
Mumps	11
Paratyphoid fever	2
Pneumonia (broncho)	31
Pneumonia (lobar)	35
Scarlet fever	53
Septic sore throat	4
Tuberculosis	35
Typhoid fever	9
Typhus fever	1
Vincent's angina	2
Whooping cough	61

MASSACHUSETTS

Cerebrospinal meningitis	4
Chicken pox	464
Conjunctivitis (suppurative)	4
Diphtheria	115

[1] Week ended Friday.

MASSACHUSETTS—continued

	Cases
German measles	11
Influenza	12
Lethargic encephalitis	2
Measles	49
Mumps	180
Ophthalmia neonatorum	28
Pneumonia (lobar)	73
Poliomyelitis	3
Scarlet fever	345
Septic sore throat	4
Trichinosis	1
Tuberculosis (pulmonary)	77
Tuberculosis (other forms)	22
Typhoid fever	14
Whooping cough	125

MICHIGAN

Diphtheria	125
Measles	68
Pneumonia	69
Scarlet fever	204
Smallpox	9
Tuberculosis	29
Typhoid fever	5
Whooping cough	111

MINNESOTA

Chicken pox	343
Diphtheria	81
Pneumonia	3
Measles	86
Scarlet fever	217
Smallpox	7
Tuberculosis	50
Typhoid fever	7
Whooping cough	0

MISSISSIPPI

Diphtheria	37
Scarlet fever	22
Smallpox	4
Typhoid fever	19

MISSOURI

(Exclusive of Kansas City)

Cerebrospinal meningitis	5
Chicken pox	88
Diphtheria	52
Epidemic sore throat	6
Glanders	2
Influenza	10
Measles	106
Mumps	7
Pneumonia	3
Scarlet fever	113
Trachoma	10
Tuberculosis	52
Typhoid fever	5
Whooping cough	25

MONTANA

Chicken pox	55
Diphtheria	1
German measles	1
Measles	106

MONTANA—continued

	Cases
Mumps	8
Scarlet fever	63
Smallpox	16
Typhoid fever	1
Whooping cough	1

NEBRASKA

Chicken pox	121
Diphtheria	9
Influenza	11
Measles	6
Mumps	13
Pneumonia	10
Scarlet fever	33
Septic sore throat	7
Smallpox	18
Typhoid fever	23
Whooping cough	33

NEW JERSEY

Chicken pox	226
Diphtheria	119
Dysentery	1
Influenza	15
Measles	41
Pneumonia	121
Poliomyelitis	5
Scarlet fever	179
Typhoid fever	10
Whooping cough	205

NEW MEXICO

Cerebrospinal meningitis	1
Chicken pox	4
Diphtheria	8
Dysentery	1
German measles	2
Influenza	2
Measles	17
Mumps	1
Pneumonia	2
Scarlet fever	33
Trachoma	1
Tuberculosis	7
Typhoid fever	7
Whooping cough	1

NEW YORK

(Exclusive of New York City)

Anthrax	3
Chicken pox	582
Diphtheria	116
Dysentery	1
German measles	44
Influenza	16
Malaria	1
Measles	957
Mumps	141
Pneumonia	228
Poliomyelitis	7
Scarlet fever	196
Septic sore throat	3
Smallpox	20
Tetanus	2
Typhoid fever	31
Vincent's angina	2
Whooping cough	302

[2] Deaths.

NORTH CAROLINA

	Cases
Chicken pox	150
Diphtheria	120
German measles	3
Malaria	1
Measles	42
Scarlet fever	53
Septic sore throat	2
Smallpox	72
Typhoid fever	7
Whooping cough	245

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Cerebrospinal meningitis—Grady County	1
Chicken pox	22
Diphtheria	58
Influenza	152
Malaria	30
Pneumonia	60
Poliomyelitis—Greer County	1
Scarlet fever	44
Smallpox	
McCurtin County	33
Scattering	9
Typhoid fever	42
Whooping cough	32

OREGON

Cerebrospinal meningitis	1
Chicken pox	37
Diphtheria	19
Influenza	18
Measles	42
Mumps	10
Pneumonia	[2] 6
Scarlet fever	47
Septic sore throat	4
Smallpox	18
Trachoma	2
Tuberculosis	15
Typhoid fever	1

PENNSYLVANIA

Cerebrospinal meningitis—Philadelphia	1
Chicken pox	962
Diphtheria	211
German measles	20
Impetigo contagiosa	9
Malaria	2
Measles	702
Mumps	58
Ophthalmia neonatorum:	
Allentown	1
Philadelphia	2
Pneumonia	44
Poliomyelitis:	
Philadelphia	1
Red Lion	1
Scabies	8
Scarlet fever	453
Tuberculosis	73
Typhoid fever	60
Whooping cough	361

RHODE ISLAND

	Cases
Chicken pox	2
Diphtheria	7
German measles	1
Influenza	10
Mumps	1
Ophthalmia neonatorum	1
Pneumonia	3
Scarlet fever	19
Tuberculosis	22
Whooping cough	2

TENNESSEE

Cerebrospinal meningitis	
Hawkins County	1
Obion County	1
Chicken pox	36
Diphtheria	62
Influenza	66
Malaria	5
Measles	20
Ophthalmia neonatorum	3
Paratyphoid fever	2
Pellagra	3
Pneumonia	50
Scarlet fever	66
Tetanus	1
Tuberculosis	23
Typhoid fever	33
Whooping cough	59

TEXAS

Chicken pox	12
Diphtheria	78
Influenza	7
Measles	2
Mumps	2
Pneumonia	4
Poliomyelitis	2
Scarlet fever	55
Small pox	2
Typhoid fever	3
Whooping cough	12

UTAH

Chicken pox	57
Diphtheria	9
German measles	3
Measles	291
Mumps	17
Pneumonia	12
Scarlet fever	15
Smallpox	1
Tuberculosis	1
Whooping cough	6

VERMONT

Chicken pox	58
Diphtheria	2
Measles	125
Mumps	28
Scarlet fever	4
Whooping cough	72

WASHINGTON

Cerebrospinal meningitis	6
Chicken pox	160
Diphtheria	39

WASHINGTON—continued

	Cases
German measles	21
Lethargic encephalitis	2
Measles	145
Mumps	36
Pneumonia	1
Scabies	2
Scarlet fever	109
Smallpox	39
Tuberculosis	47
Typhoid fever	15
Whooping cough	24

WEST VIRGINIA

Anthrax-Barbour County	1
Cerebrospinal meningitis	
Fayette County	1
Hampshire County	1
Chicken pox	115
Diphtheria	52
Influenza	50
Measles	57
Scarlet fever	65
Smallpox	2
Tuberculosis	17
Typhoid fever	22
Whooping cough	54

WISCONSIN

Milwaukee:	
Chicken pox	81
Diphtheria	26
German measles	2
Lethargic encephalitis	1
Measles	11
Mumps	41
Ophthalmia neonatorum	1
Pneumonia	17
Scarlet fever	8
Tuberculosis	12
Typhoid fever	1
Whooping cough	42
Scattering:	
Cerebrospinal meningitis	1
Chicken pox	238
Diphtheria	42
German measles	3
Influenza	36
Measles	515
Mumps	45
Pneumonia	17
Scarlet fever	115
Smallpox	8
Tuberculosis	15
Typhoid fever	5
Whooping cough	120

WYOMING

Cerebrospinal meningitis—Hot Springs County	5
Chicken pox	9
Diphtheria	2
German measles	1
Measles	13
Mumps	1
Paratyphoid fever	1
Pneumonia (broncho)	2
Scarlet fever	13
Whooping cough	8

Reports for Week Ended November 27, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	21
Diphtheria	19
Measles	2
Pneumonia	13
Scarlet fever	12
Tuberculosis	19
Typhoid fever	2
Whooping cough	5

IDAHO

	Cases
Chicken pox	4
Diphtheria	3
Measles	27
Scarlet fever	36
Smallpox	3
Tuberculosis (pulmonary)	3
Whooping cough	5

NORTH DAKOTA

	Cases
Chicken pox	75
Diphtheria	6
German measles	15
Lethargic encephalitis	1
Measles	163

NORTH DAKOTA—continued

	Cases
Mumps	2
Pneumonia	6
Poliomyelitis	1
Scarlet fever	76
Smallpox	13
Tuberculosis	5
Whooping cough	3

SOUTH CAROLINA

	Cases
Chicken pox	62
Dengue	1
Diphtheria	76
Hookworm disease	18
Influenza	642
Malaria	179
Measles	8
Paratyphoid fever	4
Pellagra	26
Scarlet fever	20
Smallpox	15
Tuberculosis	43
Typhoid fever	27
Whooping cough	36

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
Iowa, 1926										
February	3	82			587		0	250	220	0
March	1	56	628		972		0	238	128	2
April	1	41	11		870		0	232	213	2
May	0	43			650		1	134	135	3
September, 1926										
Arkansas	1	13	96	601	18	44	1	18	14	164
Wyoming	0	3	5		19		6	24	1	6
October, 1926										
Delaware	0	15	0	1	3		2	51	0	24
Florida	0	181	9	45	5	1	0	33	22	52
Idaho	3	28	2		31		0	127	1	16
Iowa	1	114			28		1	177	12	33
Mississippi		229	2,278	8,080	220	392	4	103	18	292
Montana	5	9	9		308		3	254	35	19
Oregon	5	72	70	3	53		8	218	79	37
Rhode Island	0	41	13		6		4	21	0	4
South Carolina	0	676	1,615	3,506	46	235	28	114	14	356
Virginia	2	689	909	153	127	8	11	393	11	220
Washington	13	191	11		80		2	293	90	55
Wyoming	0	6	1		21		3	59	0	6

September, 1926

	Cases
Chicken pox:	
Arkansas	73
Wyoming	9
Hookworm disease:	
Arkansas	10
Mumps:	
Arkansas	32
Wyoming	1
Ophthalmia neonatorum:	
Arkansas	3
Paratyphoid fever:	
Arkansas	12
Wyoming	2
Rocky Mountain spotted or tick fever:	
Wyoming	1
Septic sore throat:	
Wyoming	1
Trachoma:	
Arkansas	3
Tularæmia:	
Wyoming	1
Whooping cough:	
Arkansas	133
Wyoming	15

October, 1926

	Cases
Chicken pox:	
Delaware	8
Florida	3
Idaho	65
Iowa	98
Mississippi	132
Montana	129
Oregon	91
Rhode Island	17
South Carolina	44
Virginia	118
Washington	370
Wyoming	39
Conjunctivitis:	
Idaho	5
Dengue:	
Florida	1
Mississippi	101
South Carolina	33
Dysentery:	
Mississippi (amebic)	49
Mississippi (bacillary)	453
Oregon	6
Virginia	211
Washington	10
German measles:	
Florida	3
Iowa	4
Rhode Island	1
Washington	10
Wyoming	1
Hookworm disease:	
Florida	133
South Carolina	156
Mississippi	286
Virginia	13
Impetigo contagiosa:	
Iowa	1
Oregon	8

October, 1926—Continued

	Cases
Lethargic encephalitis:	
Oregon	1
Washington	4
Mumps:	
Florida	9
Idaho	9
Iowa	11
Mississippi	191
Montana	2
Oregon	42
Rhode Island	1
Washington	93
Wyoming	2
Ophthalmia neonatorum:	
Mississippi	20
Paratyphoid fever:	
Florida	3
South Carolina	17
Washington	2
Puerperal septicemia:	
Mississippi	58
Rabies (in animals):	
Mississippi	11
Oregon	3
South Carolina	16
Washington	1
Scabies:	
Iowa	2
Oregon	25
Septic sore throat:	
Idaho	2
Oregon	3
Rhode Island	3
Washington	1
Wyoming	1
Tetanus:	
Florida	1
Trachoma:	
Mississippi	7
Montana	2
Washington	1
Tularæmia:	
Wyoming	4
Typhus fever:	
Florida	2
Wyoming	2
Vincent's angina:	
Iowa	1
Whooping cough:	
Delaware	4
Florida	20
Idaho	10
Iowa	30
Mississippi	782
Montana	24
Oregon	27
Rhode Island	19
South Carolina	202
Virginia	723
Washington	37
Wyoming	29

Number of Cases of Certain Communicable Diseases Reported for the Month of September, 1926, by State Health Officers

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	25	141	57	29	66	15	242	393	114
Arizona	9	6	14	4	13	----	96	10	----
Arkansas	73	13	18	32	18	14	62	164	133
California	299	303	1,289	412	425	34	744	127	280
Colorado	11	90	22	3	54	14	119	52	24
Connecticut	17	42	26	8	88	0	130	34	110
Delaware	----	8	----	----	19	0	[1] 9	10	4
District of Columbia	9	48	3	----	25	0	106	24	57
Florida	4	80	27	26	19	39	46	48	28
Georgia	36	165	21	21	37	20	74	339	68
Idaho	6	28	9	7	48	2	[1] 2	27	38
Illinois	115	273	236	77	376	26	1,291	308	714
Indiana	7	125	54	----	155	26	151	190	147
Iowa	10	45	20	2	60	10	64	9	21
Kansas	34	48	37	9	139	8	133	124	231
Kentucky [2]	----	----	----	----	----	----	----	----	----
Louisiana	1	73	3	2	23	9	[1] 159	129	15
Maine	27	13	82	4	81	0	26	33	64
Maryland	14	95	16	17	71	1	186	283	293
Massachusetts	107	209	70	142	353	0	494	51	379
Michigan	59	369	78	12	323	12	509	127	519
Minnesota	53	189	66	----	437	2	260	36	197
Mississippi	239	145	246	278	36	4	352	418	1,174
Missouri	6	93	49	26	157	8	126	162	137
Montana	17	29	18	4	74	9	41	16	22
Nebraska [3]	----	----	----	----	----	----	----	----	----
Nevada [4]	----	----	----	----	----	----	----	----	----
New Hampshire [4]	----	----	----	----	----	----	----	----	----
New Jersey	54	173	36	----	174	0	392	138	452
New Mexico	1	12	6	6	14	8	101	46	36
New York	246	538	328	214	394	3	1,831	478	1,157
North Carolina	14	432	62	----	213	30	----	335	894
North Dakota	10	6	24	11	104	16	15	14	84
Ohio	120	374	56	29	360	18	595	573	779
Oklahoma [5]	9	122	36	4	86	2	156	535	66
Oregon	20	34	27	23	87	33	61	42	15
Pennsylvania	----	----	----	----	----	----	----	----	----
Rhode Island	3	17	7	2	15	0	21	12	42
South Carolina	35	304	24	----	37	23	164	443	88
South Dakota	15	9	90	3	94	0	11	11	40
Tennessee	18	140	25	7	130	7	138	881	219
Texas [3]	----	----	----	----	----	----	----	----	----
Utah [3]	----	----	----	----	----	----	----	----	----
Vermont	17	3	99	15	23	0	[1] 17	3	135
Virginia	41	280	138	----	185	8	[1] 135	294	699
Washington	57	110	39	58	159	59	141	61	57
West Virginia	20	81	48	----	104	25	44	212	192
Wisconsin	67	117	381	53	198	19	169	43	911
Wyoming	9	3	19	1	24	1	1	8	15

[1] Pulmonary
[2] Reports received weekly.
[3] Report not received at time of going to press.
[4] Reports received annually.
[5] Exclusive of Oklahoma City and Tulsa.

Case Rates per 1,000 Population (annual basis) for the Month of September, 1926

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	0.12	0.69	0.28	0.14	0.32	0.07	1.18	1.92	0.56
Arizona	26	17	40	12	38	-------	2.77	29	-------
Arkansas	47	08	12	21	12	.09	40	1.07	86
California	88	1.48	3.80	1.21	1.25	10	2.19	37	82
Colorado	13	1.06	26	04	64	16	1.40	61	28
Connecticut	13	33	.20	06	69	00	1.01	27	86
Delaware	-------	.41	-------	-------	98	.00	[1] 46	51	21
District of Columbia	.22	1.15	07	-------	60	00	2.53	57	1.36
Florida	04	87	30	28	21	43	50	52	31
Georgia	14	65	08	08	15	08	29	1.34	27
Idaho	15	68	22	17	1.16	.05	[1] 05	65	92
Illinois	20	47	41	.13	65	04	2.23	53	1.23
Indiana	03	49	21	-------	61	10	60	75	58
Iowa	05	22	10	01	29	.05	31	04	10
Kansas	23	32	.25	06	93	05	89	83	1.54
Kentucky [2]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Louisiana	.01	47	02	01	15	06	[1] 1.02	83	10
Maine	42	20	1.27	06	1.26	00	40	51	99
Maryland	.11	74	.13	13	56	.01	1.46	2.22	2.30
Massachusetts	31	61	20	.41	1.03	00	1.44	15	1.10
Michigan	17	1.06	22	.03	93	.03	1.46	36	1.49
Minnesota	25	89	31	-------	2.05	01	1.22	.17	50
Mississippi	1.62	99	1.67	1.89	24	.03	2.39	2.84	7.98
Missouri	.02	.33	.17	09	.55	.03	44	57	.48
Montana	.31	.53	33	.07	1.35	.16	.75	.29	.40
Nebraska [3]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Nevada [4]	-------	-------	-------	-------	-------	-------	-------	-------	-------
New Hampshire [4]	-------	-------	-------	-------	-------	-------	-------	-------	-------
New Jersey	.18	59	.12	-------	.59	.00	1.34	47	1.54
New Mexico	.03	38	19	19	45	25	3.21	1.46	1.15
New York	27	58	.36	23	.43	.00	1.98	52	1.25
North Carolina	06	1.88	.27	-------	93	.13	-------	1.46	3.89
North Dakota	18	11	.42	19	1.82	.28	26	25	1.47
Ohio	.23	.71	.11	05	.68	.03	1.13	1.09	1.48
Oklahoma [5]	05	73	.22	02	.52	.01	93	3.26	40
Oregon	.28	48	38	33	1.23	47	87	60	21
Pennsylvania	-------	-------	-------	-------	-------	-------	-------	-------	-------
Rhode Island	.06	.32	.13	04	28	00	40	23	79
South Carolina	.24	2.06	.16	-------	.25	16	1.11	3.00	60
South Dakota	27	16	1.63	.05	1.70	00	20	20	72
Tennessee	.09	.70	.12	.03	.65	03	69	4.39	1.09
Texas [2]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Utah [2]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Vermont	59	.10	3.42	.52	79	00	[1] 59	.10	4.66
Virginia	.20	1.38	.68	-------	.91	04	[1] .66	1.45	3.44
Washington	.46	.89	.32	47	1.29	.48	1.14	49	46
West Virginia	.15	61	.36	-------	78	19	33	1.59	1.44
Wisconsin	.29	.50	1.64	.23	85	08	73	18	3.91
Wyoming	.48	.16	1.02	.05	1.29	05	.05	43	80

[1] Pulmonary.
[2] Reports received weekly.
[3] Report not received at time of going to press.
[4] Reports received annually
[5] Exclusive of Oklahoma City and Tulsa

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended November 20, 1926, 41 States reported 2,702 cases of diphtheria. For the week ended November 21, 1925, the same States reported 2,298 cases of this disease. One hundred and one cities, situated in all parts of the country and having an aggregate population of more than 30,400,000, reported 1,345 cases of diphtheria for the week ended November 20, 1926. Last year for the corresponding week they reported 1,007 cases. The estimated expectancy for these cities was 1,392 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-nine States reported 4,215 cases of measles for the week ended November 20, 1926, and 3,576 cases of this disease for the week ended November 21, 1925. One hundred and one cities reported 788 cases of measles for the week this year, and 1,273 cases last year.

Poliomyelitis.—The health officers of 41 States reported 40 cases of poliomyelitis for the week ended November 20, 1926. The same States reported 70 cases for the week ended November 21, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Forty-one States—this year, 3,905 cases; last year, 3,435 cases; 101 cities—this year, 1,242 cases; last year, 1,021 cases; estimated expectancy, 942 cases.

Smallpox.—For the week ended November 20, 1926, 41 States reported 370 cases of smallpox. Last year for the corresponding week they reported 292 cases. One hundred and one cities reported smallpox for the week as follows: 1926, 28 cases; 1925, 93 cases; estimated expectancy, 47 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever.—Six hundred and fifty-nine cases of typhoid fever were reported for the week ended November 20, 1926, by 41 States. For the corresponding week of 1925 the same States reported 627 cases of this disease. One hundred and one cities reported 92 cases of typhoid fever for the week this year and 96 cases for the corresponding week last year. The estimated expectancy for these cities was 95 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 95 cities, with a population of more than 29,730,000, as follows: 1926, 760 deaths; 1925, 865 deaths.

City reports for week ended November 20, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	20	2	0	1	0	1	0	2
Newhampshire:									
Concord	22,546	0	0	0	0	0	0	0	0
Manchester	83,097	0	5	1	0	1	10	0	0
Vermont:									
Barre	10,008	1	0	1	0	0	13	0	0
Burlington	24,089	2	0	0	0	0	0	0	1
Massachusetts									
Boston	779,620	73	64	37	4	0	2	40	23
Fall River	128,993	1	5	4	1	1	1	4	4
Springfield	142,065	5	4	2	0	0	2	0	1
Worcester	190,757	22	7	7	0	0	0	2	2
Rhode Island									
Pawtucket	69,760	0	2	0	0	0	0	0	3
Providence	267,918	0	10	4	0	0	0	0	3
Connecticut									
Bridgeport	(1)	1	10	3	1	0	1	3	0
Hartford	160,197	7	10	0	0	0	0	2	4
New Haven	178,927	8	4	1	0	0	0	0	2
MIDDLE ATLANTIC									
New York.									
Buffalo	538,016	53	25	16	1	0	3	6	10
New York	5,873,356	170	197	182	77	9	13	79	150
Rochester	316,786	11	11	5	--------	1	2	0	3
Syracuse	182,003	8	12	3	--------	0	19	12	6
New Jersey:									
Camden	128,642	17	6	18	1	1	1	0	3
Newark	452,513	41	17	5	5	0	5	9	13
Trenton	132,020	2	7	2	1	0	0	0	4
Pennsylvania									
Philadelphia	1,979,364	151	82	55	--------	6	4	11	62
Pittsburgh	631,563	82	35	30	--------	3	7	0	20
Reading	112,707	15	4	0	--------	0	2	1	1
Scranton	142,266	0	5	4	--------	0	0	1	9
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409,333	13	25	24	0	1	2	11	11
Cleveland	936,485	47	50	131	0	1	3	1	12
Columbus	279,836	13	7	14	0	0	1	50	8
Toledo	287,380	80	19	8	0	0	2	0	6
Indiana:									
Fort Wayne	97,846	2	4	8	0	1	0	0	2
Indianapolis	358,819	65	12	27	0	1	0	0	12
South Bend	80,091	7	3	4	0	0	12	0	0
Terre Haute	71,071	2	4	4	0	0	0	0	2
Illinois:									
Chicago	2,995,239	176	163	78	12	9	139	30	48
Peoria	81,564	8	1	0	0	0	38	9	4
Springfield	63,923	11	3	0	0	0	2	0	3

[1] No estimate made.

City reports for week ended November 20, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Michigan:									
Detroit	1,245,824	123	71	108	2	0	2	17	32
Flint	130,316	26	14	5	0	0	3	0	3
Grand Rapids	153,698	6	8	2	0	0	0	0	1
Wisconsin									
Kenosha	50,891	12	3	1	0	0	0	0	0
Madison	46,385	14	1	2	0	0	1	0	2
Milwaukee	509,192	121	34	20	1	1	11	33	19
Racine	67,707	53	2	2	0	0	1	14	0
Superior	39,671	3	1	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota.									
Duluth	110,502	11	4	0	0	0	79	0	1
Minneapolis	425,435	169	30	35	0	1	0	1	17
St Paul	246,001	38	21	11	0	0	13	8	12
Iowa									
Davenport	52,469	0	2	1	0	-------	6	1	-------
Des Moines	141,441	0	7	5	0	-------	0	0	-------
Sioux City	76,411	29	3	2	0	-------	0	0	-------
Waterloo	36,771	50	1	0	0	-------	1	0	-------
Missouri									
Kansas City	367,481	85	15	6	1	1	0	3	10
St Joseph	78,342	6	5	1	0	0	0	1	7
St Louis	821,543	21	58	43	2	1	3	5	-------
North Dakota.									
Fargo	26,403	12	1	1	0	0	0	2	2
South Dakota:									
Aberdeen	15,036	7	0	0	0	-------	0	0	-------
Sioux Falls	30,127	4	1	0	0	-------	0	0	-------
Nebraska:									
Lincoln	60,941	9	2	0	0	0	3	1	1
Omaha	211,768	11	8	4	0	0	1	2	2
Kansas.									
Topeka	55,411	32	4	2	0	0	0	0	3
Wichita	88,367	13	8	1	0	0	1	0	3
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	10	4	0	0	0	0	0	2
Maryland.									
Baltimore	796,296	143	36	23	9	2	3	3	18
Cumberland	33,741	0	1	0	1	0	1	0	1
Frederick	12,035	0	0	1	0	0	1	0	0
District of Columbia									
Washington	497,906	33	27	15	0	0	5	0	8
Virginia:									
Lynchburg	30,395	0	2	2	0	0	1	0	4
Norfolk	(1)	8	6	2	0	0	0	0	7
Richmond	186,403	8	17	20	0	0	6	0	6
Roanoke	58,208	1	5	5	0	0	0	0	2
West Virginia									
Charleston	49,019	4	4	1	0	0	1	0	1
Huntington	63,485	0	3	8	0	-------	1	0	-------
Wheeling	56,208	22	4	3	1	0	1	0	0
North Carolina:									
Raleigh	30,371	0	3	2	0	0	0	0	0
Wilmington	37,061	3	0	4	0	0	0	0	0
Winston-Salem	69,031	2	2	15	0	0	1	2	5
South Carolina.									
Charleston	73,125	0	3	1	14	0	0	0	3
Columbia	41,225	0	1	4	0	0	0	0	0
Greenville	27,311	0	2	3	0	0	0	0	1
Georgia									
Atlanta	(1)	0	9	39	14	2	1	0	13
Brunswick	16,809	0	0	0	0	0	0	0	0
Savannah	93,134	3	4	2	1	0	0	1	1

[1] No estimate made.

City reports for week ended November 20, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—con.									
Florida									
Miami	69,754	0		2	0	0	1	0	0
St. Petersburg	26,847		1			0			1
Tampa	94,743	0	1	6	0	0	8	0	4
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	1	3	9	0	0	0	0	1
Louisville	305,935	7	13	12	0	1	1	0	8
Tennessee									
Memphis	174,533	5	13	13	0	2	0	0	7
Nashville	136,220	2	5	11	0	1	0	0	8
Alabama									
Birmingham	205,670	1	7	17	16	2	5	3	7
Mobile	65,955	0	2	0	0	0	0	0	2
Montgomery	46,481	0	2	9	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	1	0	0		0	2	
Little Rock	74,216	0	4	1	0		0	1	2
Louisiana									
New Orleans	414,493	1	12	17	7	7	5	0	14
Shreveport	57,857	1	1	4	0	0	0	0	0
Oklahoma									
Oklahoma City	(1)	1	5	3	6	1	0	0	2
Texas									
Dallas	194,450	2	14	35	0	0	1	0	5
Galveston	48,375	0	1	1	0	0	0	0	2
Houston	164,954	2	5	12	0	0	0	0	9
San Antonio	198,069	0	4	6	0	0	0	0	3
MOUNTAIN									
Montana									
Billings	17,971	4	1	0	0	0	53	0	0
Great Falls	29,883	17	2	0	0	0	0	0	0
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	1	1	0	0	0	0	5	0
Idaho									
Boise	23,042	6	1	0	0	0	0	0	0
Colorado									
Denver	280,911	12	14	12		1	6	4	8
Pueblo	43,787	10	5	0	0	0	0	0	1
New Mexico									
Albuquerque	21,000	0	1	0	0	0	0	0	0
Arizona									
Phoenix	38,669	0	0	1	0	0	0	0	2
Utah									
Salt Lake City	130,948	45	4	4	0	0	155	4	3
Nevada									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	80	6	4	0		1	10	
Spokane	108,897	27	4	1	0		78	0	
Tacoma	104,455	16	3	14	0	0	0	0	0
Oregon									
Portland	282,383	12	9	8	0	0	3	1	5
California									
Los Angeles	(1)	29	39	80	11	0	3	14	14
Sacramento	72,260	2	3	0	1	1	36	12	5
San Francisco	557,530	53	17	22	1	0	64	40	2

[1] No estimate made.

City reports for week ended November 20, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	2	1	0	0	0	0	0	0	0	6	17
New Hampshire.											
Concord	1	0	0	0	0	0	0	0	0	0	4
Manchester	2	3	0	0	0	2	0	0	0	0	14
Vermont											
Barre	0	0	0	0	0	0	0	0	0	0	5
Burlington	1	0	0	0	0	1	0	0	0	4	4
Massachusetts											
Boston	39	71	0	0	0	16	2	1	0	20	217
Fall River	1	4	0	0	0	1	2	0	0	0	32
Springfield	7	2	0	0	0	2	0	0	0	2	37
Worcester	10	16	0	0	0	1	0	1	0	6	37
Rhode Island											
Pawtucket	0	0	0	0	0	0	1	0	0	0	21
Providence	6	15	0	0	0	1	0	0	0	4	58
Connecticut											
Bridgeport	7	21	0	0	0	1	1	0	0	1	24
Hartford	6	5	0	0	0	0	0	0	0	1	24
New Haven	6	5	0	0	0	0	1	1	0	0	32
MIDDLE ATLANTIC											
New York											
Buffalo	18	21	0	0	0	6	1	2	2	21	142
New York	105	131	1	0	0	[1] 104	20	15	4	64	1,384
Rochester	7	11	0	0	0	1	1	5	1	8	59
Syracuse	12	1	0	0	0	2	1	1	0	18	56
New Jersey											
Camden	3	2	0	0	0	3	1	4	2	1	42
Newark	15	16	0	0	0	3	2	3	0	29	95
Trenton	2	1	0	0	0	4	0	0	1	6	51
Pennsylvania											
Philadelphia	61	57	0	0	0	35	5	13	1	28	530
Pittsburgh	37	17	0	0	0	7	1	0	0	13	158
Reading	2	3	0	0	0	0	0	0	0	7	24
Scranton	2	3	0	0	0	11	0	0	0	8	50
EAST NORTH CENTRAL											
Ohio											
Cincinnati	13	13	0	0	0	7	1	0	1	5	134
Cleveland	28	18	1	0	0	11	3	1	0	28	186
Columbus	9	14	1	1	0	3	1	0	0	1	69
Toledo	12	14	1	0	0	3	1	1	0	27	60
Indiana											
Fort Wayne	2	2	1	1	0	0	0	0	0	0	20
Indianapolis	11	14	3	3	0	1	0	0	0	19	98
South Bend	4	2	1	0	0	1	0	0	0	0	11
Terre Haute	3	6	0	0	0	0	0	0	0	0	14
Illinois.											
Chicago	109	90	1	0	0	25	5	5	1	63	646
Peoria	6	2	0	0	0	1	0	0	0	1	21
Springfield	2	3	1	0	0	0	0	0	0	2	23
Michigan.											
Detroit	70	71	2	0	0	23	3	1	0	41	259
Flint	9	18	0	0	0	0	1	0	0	0	24
Grand Rapids	8	20	0	0	0	3	0	0	0	0	32
Wisconsin											
Kenosha	1	5	1	0	0	1	0	0	0	1	7
Madison	1	7	0	0	0	0	0	0	0	9	11
Milwaukee	26	17	2	0	0	6	0	0	0	61	115
Racine	4	2	0	0	0	2	0	0	0	5	11
Superior	2	0	1	0	0	2	0	0	0	0	17

[1] Pulmonary tuberculosis only.

City reports for week ended November 20, 1926—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST NORTH CENTRAL											
Minnesota:											
Duluth	4	10	0	0	0	3	1	0	0	0	29
Minneapolis	39	69	1	0	0	5	1	0	0	7	97
St. Paul	16	21	7	0	0	6	0	1	0	7	61
Iowa:											
Davenport	0	3	0	0	-------	-------	0	1	-------	0	-------
Des Moines	9	3	1	0	-------	-------	0	0	-------	0	-------
Sioux City	3	5	0	0	-------	-------	0	0	-------	2	-------
Waterloo	3	2	1	0	-------	-------	0	0	-------	14	-------
Missouri:											
Kansas City	12	12	0	0	0	6	1	1	0	9	103
St. Joseph	4	4	0	0	0	1	0	0	0	0	35
St. Louis	35	36	0	0	0	8	3	1	1	23	239
North Dakota:											
Fargo	2	21	1	0	0	0	0	0	0	0	15
South Dakota:											
Aberdeen	0	8	0	0	-------	-------	0	0	-------	5	-------
Sioux Falls	2	3	0	0	-------	-------	0	0	-------	0	-------
Nebraska:											
Lincoln	1	0	0	0	0	0	0	0	0	0	12
Omaha	4	15	3	1	0	2	0	0	0	0	57
Kansas:											
Topeka	3	3	0	1	0	0	1	0	0	7	9
Wichita	3	4	0	0	0	1	0	0	0	8	26
SOUTH ATLANTIC											
Delaware:											
Wilmington	3	13	0	0	0	0	1	0	0	0	22
Maryland:											
Baltimore	17	12	0	0	0	16	4	1	1	52	225
Cumberland	1	0	0	0	0	0	1	0	3	2	21
Frederick	1	1	0	0	0	0	0	0	0	5	2
District of Columbia:											
Washington	16	5	0	0	0	14	3	2	0	9	142
Virginia:											
Lynchburg	0	5	0	0	0	0	0	1	0	1	14
Norfolk	3	3	0	0	0	0	0	3	0	3	-------
Richmond	8	10	0	0	0	8	1	0	0	0	60
Roanoke	2	8	1	0	0	0	1	0	0	0	20
West Virginia:											
Charleston	1	2	0	0	0	3	0	0	0	0	14
Huntington	2	6	0	0	-------	-------	0	0	-------	0	-------
Wheeling	2	0	0	0	0	0	1	1	0	3	13
North Carolina:											
Raleigh	2	3	0	0	0	0	0	0	0	24	11
Wilmington	1	1	0	0	0	0	1	1	0	3	10
Winston-Salem	1	6	1	1	0	1	1	0	0	7	26
South Carolina:											
Charleston	0	1	0	0	0	1	1	0	0	1	19
Columbia	1	1	0	0	0	0	0	0	0	0	-------
Greenville	1	1	0	0	0	0	0	2	0	0	6
Georgia:											
Atlanta	6	4	0	0	0	6	1	1	0	0	67
Brunswick	0	0	0	0	0	1	0	0	0	0	2
Savannah	0	0	0	0	0	2	0	0	0	1	31
Florida:											
Miami	-------	3	-------	0	0	2	-------	2	1	0	41
St. Petersburg	0	-------	0	-------	0	3	0	-------	0	-------	20
Tampa	0	1	0	1	0	0	0	0	0	2	41
EAST SOUTH CENTRAL											
Kentucky:											
Covington	2	1	0	0	0	1	0	0	0	0	21
Louisville	4	7	0	0	0	1	2	1	0	7	84
Tennessee:											
Memphis	5	17	0	0	0	5	1	2	1	3	68
Nashville	4	5	0	0	0	9	2	4	2	2	63
Alabama:											
Birmingham	4	14	0	0	0	4	2	0	0	0	56
Mobile	0	0	0	0	0	1	0	0	0	0	23
Montgomery	0	0	0	0	0	0	0	0	0	0	19

City reports for week ended November 20, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	2	1	0	0	--------	--------	1	1	--------	1	--------
Little Rock	2	2	0	0	--------	7	1	0	1	8	--------
Louisiana											
New Orleans	6	6	0	0	0	6	2	1	0	4	149
Shreveport	1	1	0	0	0	0	1	0	1	0	18
Oklahoma											
Oklahoma City	3	4	0	1	0	1	1	0	0	0	31
Texas											
Dallas	5	14	0	1	0	2	1	0	0	0	61
Galveston	0	1	0	0	0	0	1	0	0	0	14
Houston	1	0	0	0	0	4	0	0	0	0	56
San Antonio	1	2	0	0	0	7	0	1	0	0	57
MOUNTAIN											
Montana											
Billings	1	0	0	0	0	0	0	0	0	0	3
Great Falls	1	1	1	0	0	0	0	0	0	0	6
Helena	0	0	0	0	0	1	0	0	0	0	7
Missoula	0	11	1	0	0	0	0	0	0	0	4
Idaho											
Boise	1	0	0	0	0	0	0	0	0	0	7
Colorado											
Denver	9	56	4	0	0	18	1	1	0	2	82
Pueblo	1	0	0	0	0	1	0	1	0	0	12
New Mexico											
Albuquerque	0	0	0	0	0	10	1	0	0	0	19
Arizona											
Phoenix	3	3	0	0	0	8	0	0	0	0	18
Utah											
Salt Lake City	3	2	1	0	0	3	0	1	0	1	36
Nevada											
Reno	0	0	0	0	0	0	0	0	0	0	7
PACIFIC											
Washington											
Seattle	8	12	3	0	--------	--------	1	3	--------	10	--------
Spokane	6	22	2	0	--------	--------	0	1	--------	6	--------
Tacoma	2	1	2	14	0	0	0	0	0	3	--------
Oregon											
Portland	7	31	3	3	0	3	1	0	0	0	61
California											
Los Angeles	20	63	2	4	0	21	2	0	0	2	259
Sacramento	2	9	1	0	0	1	0	3	0	1	22
San Francisco	9	18	0	0	0	8	1	4	0	18	--------

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis (infantile paralysis): Cases	Poliomyelitis (infantile paralysis): Deaths
NEW ENGLAND									
Massachusetts:									
Boston	0	0	0	0	1	0	1	0	0
Worcester	0	0	1	0	0	0	0	0	0
Connecticut									
Hartford	1	0	0	0	0	0	0	0	0
MIDDLE ATLANTIC									
New York									
New York	2	2	6	2	0	0	5	3	0
New Jersey									
Newark	0	0	1	0	0	0	1	1	1
Pennsylvania									
Philadelphia	1	0	2	1	0	0	1	1	0

City reports for week ended November 20, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio									
Cleveland	1	0	0	0	0	0	0	1	0
Indiana									
Indianapolis	1	0	0	0	0	0	0	0	0
Illinois:									
Chicago	2	1	0	0	0	0	1	0	0
Wisconsin									
Milwaukee	4	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota.									
Minneapolis	0	0	0	2	0	0	0	0	0
St Paul	0	0	1	0	0	0	1	0	0
Nebraska:									
Lincoln	0	0	0	0	0	0	0	1	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	1	0	0	0	0	0	0	0	0
District of Columbia									
Washington	0	1	0	0	0	0	0	0	0
North Carolina.									
Raleigh	0	0	0	0	0	1	0	0	0
Georgia:									
Savannah	0	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL									
Kentucky									
Louisville	0	1	0	0	0	0	0	0	0
Tennessee									
Nashville	1	1	0	0	0	0	0	0	0
Alabama.									
Birmingham	0	0	1	0	0	0	0	0	0
Mobile	0	0	0	0	0	2	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	1	4	0	0	0
Louisiana.									
New Orleans	1	0	0	0	1	0	0	0	0
Texas									
Dallas	0	0	0	0	1	1	0	0	0
Houston	1	1	0	0	0	0	0	0	0
MOUNTAIN									
Colorado.									
Pueblo	0	1	0	0	0	0	0	0	0
PACIFIC									
California:									
Los Angeles	0	0	0	0	1	1	0	0	2

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended November 20, 1926, compared with those for a like period ended November 21, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had an estimated aggregate population of nearly

30,000,000 in 1925 and nearly 30,500,000 in 1926 The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926 The number of cities included in each group and the estimated aggregate populations are shown in a separate table below

Summary of weekly reports from cities, October 17 to November 20, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Oct 24, 1925	Oct 23, 1926	Oct. 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov. 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926
101 cities	[2] 163	203	[3] 176	213	161	224	169	[4] 228	176	230
New England	[5] 94	85	132	106	93	118	122	135	139	139
Middle Atlantic	128	122	148	138	125	142	140	162	143	159
East North Central	180	261	186	241	178	276	185	264	180	292
West North Central	256	240	278	264	264	252	235	[4] 216	221	213
South Atlantic	[6] 252	302	213	357	198	319	236	391	271	278
East South Central	100	400	89	384	126	425	63	265	121	368
West South Central	101	280	251	331	189	254	203	379	167	327
Mountain	361	255	[3] 170	155	277	218	240	182	305	146
Pacific	135	191	149	205	111	288	138	232	177	326

MEASLES CASE RATES

	Oct 24, 1925	Oct 23, 1926	Oct. 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov. 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926
101 cities	[2] 91	49	[3] 102	64	149	81	169	[4] 106	222	135
New England	[5] 578	26	582	24	822	66	903	31	1,090	47
Middle Atlantic	87	12	110	13	159	16	170	44	255	28
East North Central	45	47	54	77	70	80	84	100	97	121
West North Central	10	42	12	85	14	151	10	[4] 152	14	197
South Atlantic	[6] 37	26	56	9	144	21	217	24	271	54
East South Central	37	21	16	21	16	26	16	10	47	31
West South Central	13	4	4	0	9	9	9	26	9	26
Mountain	28	337	[3] 19	391	37	792	46	1,529	28	1,948
Pacific	11	278	14	342	17	315	19	280	30	491

SCARLET FEVER CASE RATES

	Oct 24, 1925	Oct 23, 1926	Oct. 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov. 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926
101 cities	[2] 127	152	[3] 155	169	163	189	182	[4] 208	178	213
New England	[5] 125	194	194	246	261	265	237	352	201	331
Middle Atlantic	96	51	106	92	110	94	142	125	143	129
East North Central	135	155	185	157	159	189	180	185	187	202
West North Central	284	373	292	354	358	415	354	[4] 354	401	407
South Atlantic	[6] 126	163	180	133	173	199	161	178	115	145
East South Central	121	223	74	332	100	249	168	296	126	228
West South Central	40	95	40	112	97	112	114	142	88	116
Mountain	111	446	[3] 189	364	166	583	176	701	157	637
Pacific	127	235	141	237	155	205	196	280	188	337

SMALLPOX CASE RATES

	Oct 24, 1925	Oct 23, 1926	Oct. 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov. 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926
101 cities	[2] 7	3	[3] 10	3	9	3	8	[4] 5	16	5
New England	[5] 7	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	4	3	16	1	12	6	13	10	31	3
West North Central	4	0	25	2	10	2	4	[4] 10	16	4
South Atlantic	[6] 0	9	6	6	12	0	6	2	19	4
East South Central	5	10	5	5	26	10	32	16	11	0
West South Central	0	0	0	4	0	9	0	30	0	4
Mountain	9	0	[3] 9	9	18	0	18	9	18	0
Pacific	75	16	44	22	47	3	41	5	75	49

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Barre, Vt , and Winston-Salem, N. C., not included.
[3] Helena, Mont., not included
[4] Sioux City, Iowa, not included.
[5] Barre, Vt , not included
[6] Winston-Salem, N C , not included.

Summary of weekly reports from cities, October 17 to November 20, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926
101 cities	[2] 32	26	[3] 25	27	27	24	11	[4] 21	17	16
New England	[5] 14	19	17	12	22	17	2	9	31	7
Middle Atlantic	25	20	21	14	12	12	8	21	20	21
East North Central	9	13	15	17	18	13	9	10	3	5
West North Central	33	22	18	24	31	26	16	[4] 17	14	6
South Atlantic	[6] 73	77	25	75	60	45	10	36	29	23
East South Central	147	99	100	140	168	104	42	52	32	36
West South Central	79	22	79	39	48	22	57	34	31	13
Mountain	65	27	[3] 85	46	37	91	9	27	18	27
Pacific	30	13	19	19	8	46	3	30	6	30

INFLUENZA DEATH RATES

	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926
95 cities	[2] 8	7	[3] 10	11	13	11	11	14	8	10
New England	[5] 2	7	12	7	5	12	7	2	2	2
Middle Atlantic	8	8	10	8	14	9	14	10	6	10
East North Central	9	5	7	14	11	6	10	10	6	10
West North Central	6	2	11	2	6	6	13	13	2	6
South Atlantic	[6] 2	8	6	21	17	15	2	17	13	8
East South Central	5	10	26	10	37	21	26	26	42	31
West South Central	19	14	34	24	15	43	29	71	10	33
Mountain	37	27	[3] 9	9	9	18	0	27	18	9
Pacific	4	0	4	7	15	7	4	14	18	4

PNEUMONIA DEATH RATES

	Oct 24, 1925	Oct 23, 1926	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926
95 cities	[2] 88	85	[3] 117	96	133	101	132	106	146	123
New England	[5] 87	83	108	99	134	99	120	90	139	104
Middle Atlantic	89	104	136	101	143	113	143	114	160	135
East North Central	79	60	114	86	119	84	131	85	139	106
West North Central	60	49	97	63	86	84	81	76	101	120
South Atlantic	[6] 116	113	129	107	194	120	152	139	146	143
East South Central	121	99	105	135	152	99	163	166	221	171
West South Central	111	57	116	80	150	118	102	113	155	156
Mountain	111	127	[3] 76	182	102	164	176	155	222	109
Pacific	76	99	47	89	91	50	109	99	87	75

[2] Barre, Vt., and Winston-Salem, N. C., not included.
[3] Helena, Mont., not included.
[4] Sioux City, Iowa, not included.
[5] Barre, Vt., not included.
[6] Winston-Salem, N. C., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended November 13, 1926.—The following report for the week ended November 13, 1926, was transmitted by the Eastern Bureau of the Secretariat of the Health Section of the League of Nations, located at Singapore, to the Headquarters at Geneva:

Maritime towns	Plague		Cholera		Small-pox		Maritime towns	Plague		Cholera		Small-pox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths		Cases	Deaths	Cases	Deaths	Cases	Deaths
British India							Siam Bangkok	0	0	2	1	2	1
Calcutta	----	0	----	19	2	2	French Indo-China						
Bombay	----	0	----	0	4	2	Saigon and Cholon	0	0	1	1	0	0
Madras	----	0	----	0	3	0	Turane	0	0	10	6	0	0
Straits Settlements							Haiphong	0	0	22	8	0	0
Singapore	0	0	3	3	6	1	Korea Fusan	0	0	0	0	2	----
Dutch East Indies							Mauritius Port Louis	----	2	0	0	0	0
Cheribon	0	0	0	0	0	0							
Surabaya	0	0	0	0	1	0							

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia.—Aden, Jeddah, Kamaran, Perim.

Iraq.—Basrah

Persia.—Mohammerah, Bender-Abbas, Bushire.

British India.—Rangoon, Karachi, Chittagong, Cochin, Vizagapatam, Negapatam, Tuticorin.

Portuguese Indies.—Nova Goa

Ceylon.—Colombo

Federated Malay States.—Port Swettenham.

Straits Settlements.—Penang

Dutch East Indies.—Samarang, Batavia, Sabang, Makassar, Banjermasin, Palembang, Pontianak, Belawan-Deli, Padang, Samarinda, Balikpapan

Sarawak.—Kuching

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao

Portuguese Timor.—Dilly

China.—Amoy, Shanghai (International Settlement)

Hongkong

Macao

Formosa.—Keelung.

Japan.—Yokohama, Osaka, Nagasaki, Kobe, Niigata, Tsuruga, Hakodate, Shimonoseki, Moji

Korea.—Chemulpo

Manchuria.—Mukden, Changchun, Harbin, Antung, Yingkow.

Kwantung.—Port Arthur, Dairen.

U. S. S. R.—Vladivostok.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island.

New Guinea.—Port Moresby.

New Britain Mandated Territory.—Rabaul and Kokopo

New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin

New Caledonia.—Noumea

Fiji.—Suva

Hawaii.—Honolulu

Society Islands.—Papeete

AFRICA

Egypt.—Port Said, Suez, Alexandria

Anglo-Egyptian Sudan.—Port Sudan, Suakin.

Eritrea.—Massaua

French Somaliland.—Jibuti

British Somaliland.—Berbera

Italian Somaliland.—Mogadiscio

Kenya.—Mombasa

Zanzibar.—Zanzibar

Tanganyika.—Dar-es-Salaam

Seychelles.—Victoria

Madagascar.—Majunga, Tamatave

Portuguese East Africa.—Mozambique, Beira, Lourenço Marques.

Union of South Africa.—East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

Dutch East Indies—Tarakan, Menado
Philippine Islands—Manila, Iloilo, Jolo, Cebu, Zamboanga
Union of South Africa—Durban

BRAZIL

Mortality from certain diseases—Para—September 26–October 30, 1926.—During the period September 26 to October 30, 1926, 50 deaths from gastroenteritis, 28 from malaria, and 8 from smallpox were reported at Para, Brazil. Population, 185,000

Leprosy—During the period under report leprosy was continuously reported present at Para.

CANADA

Communicable diseases—Week ended November 13, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the week ended November 13, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal fever				1				1
Influenza	11					1		12
Poliomyelitis			2	4				6
Smallpox				17	25	4	9	55
Typhoid fever	3	4	9	10	1	7		34

Vital statistics—Quebec—September, 1926.—Births and deaths in the Province of Quebec for the month of September have been reported as follows:

Estimated population	2,570,000	Deaths from—Continued.	
Births	6,598	Heart disease	374
Birth rate per 1,000 population	30.80	Influenza	38
Deaths (all causes)	2,932	Measles	6
Death rate per 1,000 population	13.69	Poliomyelitis (infantile paralysis)	1
Deaths under 1 year	1,171	Scarlet fever	9
Infant mortality rate	177.47	Syphilis	6
Deaths from—		Tuberculosis (pulmonary)	189
Cancer	133	Tuberculosis (other forms)	44
Cerebrospinal meningitis	5	Typhoid fever	22
Diabetes	21	Whooping cough	47
Diphtheria	18		

CANARY ISLANDS

Plague—Las Palmas—November 2, 1926.—Three cases of plague were reported, November 2, 1926, at Las Palmas, Canary Islands. The occurrence was stated to be in a locality removed from the port.

EGYPT

Plague—October 22–28, 1926.—During the week ended October 28, 1926, a case of plague was reported in Egypt occurring in the district of Tanta.

Summary.—From January 1 to October 28, 1926, 140 cases of plague were reported in Egypt, as compared with 134 cases reported during the corresponding period of the year 1925.

ESTONIA

Communicable diseases—September, 1926.—Communicable diseases were reported in the Republic of Estonia during the month of September, 1926, as follows:

Disease	Cases	Disease	Cases
Diphtheria	19	Scarlet fever	246
Leprosy	1	Tuberculosis	123
Measles	103	Typhoid fever	93
Paratyphoid fever	25		

Population, census, 1,107,059

LATVIA

Communicable diseases—September, 1926.—During the month of September, 1926, communicable diseases were reported in the Republic of Latvia as follows:

Disease	Cases	Disease	Cases
Diphtheria	40	Rabies	2
Dysentery	22	Scarlet fever	292
Erysipelas	18	Tetanus	2
Measles	13	Trachoma	20
Mumps	1	Typhoid fever	102
Paratyphoid fever	3	Whooping cough	46
Puerperal fever	1		

Population, 1,850,000.

Botulism.—During the same period eight cases of botulism were reported in the Republic of Latvia.

MALTA

Communicable diseases—October, 1926.—During the month of October, 1926, communicable diseases were reported in the island of Malta as follows:

Disease	Cases	Disease	Cases
Broncho-pneumonia	6	Pneumonia	5
Diphtheria	6	Puerperal infection	2
Erysipelas	2	Scarlet fever	1
Influenza	3	Trachoma	143
Lethargic encephalitis	1	Tuberculosis	17
Malaria	1	Typhoid fever	72
Malta fever	58	Whooping cough	21
Measles	19		

Population, civil, estimated, 225,242

MEXICO

Mortality from gastroenteritis—Progreso—November 14-27, 1926—Contaminated water supply.—During the two weeks ended November 27, 1926, eight deaths from gastroenteritis were reported at Progreso, Mexico. Population, 9,089. Contamination of cisterns and other water supplies was reported.

PERU

Communicable diseases—Lima—August, 1926.—During the month of August, 1926, communicable diseases were reported in the city of Lima, Peru, as follows:

Disease	Cases	Disease	Cases
Gastroenteritis	27	Puerperal septicemia	1
Influenza	10	Tuberculosis	73
Malaria	11	Typhoid fever	3
Plague	1		

Population, 210,000.

UNION OF SOUTH AFRICA

Plague—Cape Province—October 10-16, 1926.—During the week ended October 16, 1926, two fatal cases of plague were reported in the Cape Province, Union of South Africa, of which one (native or colored) occurred in Hanover District and one (European) in Kimberley District. Both cases occurred on farms

Smallpox.—Outbreaks of smallpox were reported during the period under report as follows: In the Umgeni area, Durban, 12 cases, of which 11 cases were Hindus and 1 case native; at Prospect Hall, Inanda District, 1 case, native, in a contact with the Durban cases. The cases were removed to Salisbury Island quarantine, Durban Bay.

YUGOSLAVIA

Communicable diseases—September, 1926.—During the month of September, 1926, communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	89	10	Scarlet fever	470	75
Meningococcus meningitis	3	2	Tetanus	32	18
Diphtheria	180	38	Typhoid fever	586	52
Dysentery	264	24	Whooping cough	195	12
Measles	205	3			

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended December 10, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Canton	Aug 25-31	30	8	
Shanghai	Oct 10-23	3	1	Cases, foreign, deaths, native and foreign in international concessions
Tsingtao	Oct 10-16			Present
Siam				Oct 10-16 1926 Cases 1, deaths, 3 Apr 1-Oct 16, 1926 Cases, 7,670, deaths, 5,043
Bangkok	Oct 10-16	1		

PLAGUE

Place	Date	Cases	Deaths	Remarks
Canary Islands				
Las Palmas	Nov 2	3		Stated to be in locality removed from port
Egypt				Oct 22-28, 1926 Cases, 1 Jan 1-Oct 28, 1926 Cases, 140, corresponding period, year 1925. Cases, 134
Tanta District	Oct 22-28	1		
India				
Madras Presidency	Oct. 3-9	114	46	
Rangoon	Oct. 10-16	3	1	
Siam				Apr 1-Oct 16, 1926 Cases, 15; deaths, 10
Union of South Africa				
Cape Province—				
Hanover District	Oct 10-16	1	1	Native On farm
Kimberley District	do	1	1	European On farm.

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Brazil				
Bahia	Oct 4-10	2	2	
Para	Sept 26-Oct. 30	9	8	
Pernambuco	Sept. 26-Oct 2	25	3	
Canada				
Alberta	Nov 7-13	9		
Calgary	Nov 16-22	3		
Manitoba	Nov 7-13	25		
Ontario	do	17		
Kingston	Oct 31-Nov 6	1		
Toronto	Nov 14-20	7		
Saskatchewan	Nov 7-13	4		
Ceylon				
Colombo	Oct 10-16	1		Developed in infectious disease hospital.
China				
Chungking	do			Present
Egypt				
Alexandria	Oct 15-21	1	1	
France				
Paris	Oct 21-31	11	6	
Great Britain				
England and Wales	Oct 24-Nov. 6	433		
Newcastle-on-Tyne	Nov 7-13	1		
Sheffield	Oct 31-Nov 13	11		
India				
Karachi	Oct 24-30	1		
Madras	do	1		
Mexico.				
Torreon	Nov 7-13		2	
Persia				
Teheran	July 24-Aug. 23		4	
Portugal				
Oporto	Oct 31-Nov. 6	1	1	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended December 10, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				
Natal—				
Durban	Oct 10-16	12		In the Umgeni area, Hindus 11, native, 1

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Chile				
Concepcion	October, 1926			Stated to be present in gaol
Iquique	Oct 16	1		
Valparaiso	Oct 31-Nov 6	4		
China				
Manchuria—				
Harbin	Oct 14-20	1		
Iraq				
Bagdad	Oct 10-16	1		
Mexico				
Mexico City	Oct 31-Nov 6	8		Including municipalities in Federal district
Palestine				
Bitunia	Oct 31-Nov 6	1		
Jaffa	do	1		
Nazareth	do	3		
Persia				
Teheran	July 24-Aug 23		3	
Peru				
Lima	Aug 1-31	1		
Union of South Africa				
Orange Free State—				
Brandfort District	Oct 10-16			Outbreak on farm

Reports Received from June 26 to December 3, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926 Cases, 31, deaths, 29
China				
Amoy	Aug 8-Oct 23	271		Stated to be present in epidemic form
Antung	Aug 1-31	500		
Canton	June 1-30	38	14	
Do	July 15-31	54	28	
Changsha	Oct 3-16	2		
Foochow	Aug 15-Oct 2		1	In foreign population.
Kulangsu	Sept 12-18		2	
Manchuria—				
Changshun	Aug 1-31	320		
Dairen	do	10	1	
Harbin	Aug 5-Sept 12	289	83	
Newchwang	Aug. 1-31	167		
Nanking	July 25-Oct 2			Present
Shanghai	Reported July 20	35	8	Cases, foreign deaths, native and foreign
Do	July 25-Oct 9	40	419	
Swatow	July 11-Oct 16	50	63	
Tsingtao	July 11-Aug 30	4	4	Japanese settlements, 10 deaths, Chinese, 30 to 40 deaths daily; estimated.
Chosen				
North Heian Province	Sept 3-16	70	30	Deaths estimated
Shingishu	Sept. 13	19		Including places in vicinity.
French Settlements in India	Mar 7-June 26	31	30	
Do	June 27-Aug. 28	94	83	

[1] From medical officers of the Public Health Service, American consuls, and other sources

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 3, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
India				Apr 25-June 26, 1926 Cases, 18,526, deaths, 11,531 June 27-Oct 2, 1926 Cases, 27,267, deaths, 17,286
Bombay	May 30-June 5	1	1	
Do	July 18-Oct 16	4	4	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-Sept 25	304	272	
Madras	May 16-June 5	2	1	
Do	Aug 1-Sept 25	7	6	
Rangoon	May 9-June 26	67	44	
Do	June 27-Sept 4	31	29	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug. 14	31	17	
Japan				To Sept 10, 1926 Cases, 35.
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama.
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Taihoku	Sept 1-10	2		
Wakayama	To Sept 10	2		
Taiwan Island	Sept 21-Oct 10	11		
Philippine Islands				
Manila	Dec 29, 1925-Oct 2, 1926	26	6	
Provinces—				
Albay	Apr. 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb 21-Mar 6	3	3	
Pampanga	July 25-31	1	1	
Rizal	July 18-24	1		
Romblon	Dec. 14-31	42	43	
Do	Jan 2-Mar 27	41	35	
Siam				Apr 1-Oct. 9, 1926: Cases, 7,669; deaths, 5,040.
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-Oct 9	96	68	
Straits Settlements				
Singapore	July 4-17	2	1	
On vessel				
Steamship Macedonia	Aug 5	7		At Yokohama, Japan. Vessel sailed from Singapore July 18, 1926

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported
Do	July 1-20	1		
Do	Sept 23	1		
Bona	Aug 14			
Oran	Sept 21-Oct 10	1	4	
Philippeville	Sept. 7	1		
Azores				
Fayal Island—				
Horta	Aug 2-29	2	2	
St Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	
Brazil				
Paranagua	Oct 8			Present.
British East Africa				
Kisumu	May 16-22	1	1	
Do	Aug 17-Sept. 11	3	2	
Uganda	Mar 1-June 30	732	574	
Canary Islands				
Teneriffe	Aug 2	2		
Ceylon.				
Colombo	May 29-June 5	1	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 3, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Chile				
Iquique	June 20-26		1	
China				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug 7	28		
Foochow	June 6-July 31			Several cases Not epidemic
Nanking	May 9-Sept 18			Prevalent
Swatow	July 25-31	14		
Ecuador				January-June, 1926 Cases, 385, deaths, 154
Chimborazo	January-June	9	2	Rats taken, 766
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1-Oct 31	19	3	Rats taken, 82,774; found infected, 115
Leon	January-June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1,542
Egypt				Jan 1-Oct 21, 1926. Cases, 139
City—				
Alexandria	July 27-Aug 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
Sidi Barrani	Sept 30-Oct. 21	23	3	In western desert.
France.				
Marseille	July 8	1	1	Reported July 24
Paris	Oct. 18	1		
St Denis	Reported Aug 2	1		Vicinity of Paris
St Ouen	Aug 14	2		Suburb of Paris
Great Britain				
Liverpool	Aug 29-Sept 4	2	1	
Greece				
Athens	Apr 1-May 31	16	4	Including Piræus
Do	Aug 1-Sept 30	20	5	Do
Patras	May 27-June 12	4	1	
Do	July 25-Oct 29	9	5	
Zante	May 17	1		
Hawaii Territory				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Honokaa	Oct 6	1	1	
Paauhau	July 18-24			Plague-infected rat trapped
India				Apr 25-June 16, 1926 Cases, 53,001; deaths, 41,576. June 27-Oct. 2, 1926 Cases, 9,026, deaths, 5,143
Bombay	May 2-June 26	16	15	
Do	July 18-Oct 9	13	12	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	162	93	
Do	July 4-Oct 2	831	399	
Rangoon	May 9-June 26	20	15	
Do	June 27-Oct. 9	84	74	
Indo-China.				
Saigon	May 23-June 26	8	3	
Do	July 18-Aug 7	2	1	
Iraq				
Bagdad	Apr 18-June 12	161	108	
Do	July 18-Sept 11	4	4	
Japan:				
Yokohama	July 2-Aug. 10	9	80	
Java:				
Batavia	Apr 24-June 19	65	65	
Do	June 26-Oct 16	89	87	
Cheribon	Apr 11-24	3	3	
Do	Sept 12-18	1	1	
East Java and Madura	June 13-19	1	1	
Do	July 25-Oct 16	1	2	
Surabaya	Aug. 22-Sept 25	18	2	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 3, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic.
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Do	Aug 16-Sept 15	7	7	
Maevatanana	do	2	2	
Majunga Province	June 16-30	10	6	
Do	Aug 16-Sept. 15	57	48	
Mananjary Province	do	1	1	
Moramanga Province	Apr 1-15	2	2	Do
Do	Sept 1-15	8	8	
Tamatave Province	Aug 16-Sept. 15	17	12	
Tananarive Province				Apr 1-June 30, 1926 Cases, 130, deaths, 120 July 1-Sept. 15, 1926 Cases, 155, deaths, 148
Towns—				
Majunga	Aug 1-15	14	10	
Tamatave (Port)	May 16-31	1	1	
Do	July 1-Aug 15	6	5	
Tananarive	Apr. 1-June 30	7	7	
Do	July 1-Sept 15	28	28	
Mauritius:				
Port Louis	July 31	1	1	
Nigeria				Feb 1-June 30, 1926: Cases, 191, deaths, 163 July 1-31, 1926. Cases, 121, deaths, 112.
Peru				May-June, 1926 Cases, 57; deaths, 16 July 1-Sept. 30, 1926 Cases, 89; deaths, 52.
Departments—				
Ancash	May 1-31			Present
Do	July 1-Sept 30	2		
Cajamarca	May 1-June 30	10	4	
Do	Aug 1-Sept 30	1		
Ica	May 1-31	1		
Do	July 1-31	1		
Junin	Sept 1-30	21	20	
Lambayeque	do	1		
Libertad	May 1-31	4		
Do	Sept. 1-30	3	1	
Lima	May 1-June 30	29	12	
Do	July 1-Sept 30	60	31	
Piura	June 1-30	13		
Russia				Jan 1-Mar 31, 1926 Cases, 37
Senegal				Nov. 1-30, 1925: Cases, 3; deaths, 2 Mar. 1-June 30, 1926: Cases, 342; deaths, 213
Siam				Apr 1-Oct 2, 1926: Cases, 15; deaths, 10
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements:				
Singapore	May 2-8	1	1	
Do	July 4-17	1	1	
Syria				
Beirut	July 1-Aug 10	2		
Do	Oct 15			Present
Tunisia	May 11-June 30	174		
Do	July 1-Aug 20	13		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Turkey				
Contantinople	Aug 1-Sept 25	7	4	
Union of South Africa,				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug 21	3	3	
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District	Aug 15-21	1		
Protestpan	May 9-22	3	3	
On vessel				
Steamship Zaria	September, 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa, 29 plague-infected rats found on board.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 3, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				July 21-Sept 20, 1926 Cases, 230
Algiers	May 21-June 20	14		
Do	July 1-Aug 31	3		
Arabia				
Aden	Oct 3-9	1		Imported
Belgium				Sept 1-30, 1926 Cases, 2.
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-Aug 31	16	8	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Oct 2	71	39	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-Sept 25	29	19	
Pernambuco	July 11-Sept 25	166	22	
Porto Alegre	Aug 10-31	2		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 25	2,534	1,338	
Do	Oct 3-16	196	113	Jan 1-Oct 16, 1926 Cases, 3,601, deaths, 1,896
Sao Paulo	June 27-Aug 22		5	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives.
Do	June 8-14	5		
Do	Sept 11-17	1		
Canada				May 30-June 26, 1926. Cases, 70 June 27-Nov 6, 1926. Cases, 359
Alberta				May 30-June 12, 1926 Cases, 3 June 27-Nov 6, 1926. Cases, 73
Calgary	Sept 5-Nov. 13	44		
British Columbia—				
Vancouver	Aug 16-Sept. 12	3		
Manitoba				May 30-June 26, 1926. Cases, 15 June 27-Nov 6, 1926 Cases, 53
Winnipeg	June 6-12	5		
Do	July 4-Nov 6	13		
New Brunswick				Oct 31—Nov 6, 1926 1 case.
Northumberland County	Oct 11-23	1		
Ontario				May 30-June 26, 1926 Cases, 36. June 27-Nov 6. Cases, 127.
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-17	2		
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Peterboro	Sept. 1-30	10		
Toronto	July 18-Nov. 13	31		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16 June 27-Nov 6 Cases, 105
Regina	July 4-Sept 25	3		
Ceylon				Mar 14-May 29, 1926 Cases, 44, deaths, 3 Sept 12-18, 1926 Cases, 2
Colombo	Sept 19-Oct 2	6		
Chile:				
Antofagasta	June 6-12	1		
China:				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Changsha	Aug 8-14	1		
Chungking	May 2-Oct 9			Present.
Foochow	do			Do.
Fushun	Sept 12-18	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 3, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-Sept 11	2		Do
Dairen	Apr 26-June 20	69	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do
Harbin	May 14-June 30	21		Do
Do	July 1-28	12		
Kai-yuan	May 16-June 30	10		Do
Kungchuling	June 13-19	1		Do
Liaoyang	May 16-June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do
Do	Aug 8-Oct 3	3		Do
Ssupingai	May 16-June 30	2		Do
Do	Aug 1-7	1		Do
Teshihchiao	May 16-June 30	2		Do
Tieh-ling	Sept 27-Oct 3	1		
Wa-feng-tien	do	3		Do
Do	Aug 1-7	1		Do
Nanking	May 8-Sept 18			Present
Shanghai	May 2-June 26	10	25	Cases, foreign Deaths, population of international concession, foreign and native
Do	June 27-July 24	3	3	
Do	Oct 3-9	1		
Swatow	May 9-Oct 23			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-June 30, 1926 Cases, 667, deaths, 146 July 1-31, 1926. Cases, 82, deaths, 27
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Oct 7	13	6	
Cairo	Jan 29-May 13	39	8	
Estonia				May 1-June 30, 1926 Cases, 3.
France				Mar 1-June 30, 1926 Cases, 141. July 1-Aug 31. Cases, 24.
Paris	Sept 1-Oct 20	54	12	
St Etienne	Apr 18-June 15	7	3	
Do	Sept 16-30	2	1	
French Settlements in India	Mar 7-June 26	282	282	
Do	June 27-Aug 28	68	68	
Germany				
Coblenz	Oct 24-30	1		
Gold Coast	Mar 1-June 30	9		
Do	July 1-31	20	1	
Great Britain				
England and Wales				May 23-June 26, 1926 Cases, 933; June 27-Oct 23, 1926: Cases, 1,764
Birmingham	Sept 26-Oct 2	1		
Bradford	May 23-29	1		
Do	Aug 29-Sept 4	1		
Hull	Oct 17-23	1		
London	Sept 26-Oct 23	4		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-Oct 30	5		At Gateshead, several cases reported.
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Oct 23	21		
South Shields	Oct 3-9	1		
Greece				
Athens	July 1-31	71	6	Including Piræus
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr 25-June 26, 1926 Cases, 54,851; deaths, 14,771. June 27-Oct 2. 1926 Cases, 27,415, deaths, 8,365
Bombay	May 2-June 26	220	134	
Do	June 27-Oct. 16	122	67	
Calcutta	Apr. 4-May 20	171	152	
Do	June 13-26	24	18	
Do	June 27-Oct 2	45	42	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 3, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
India—Continued.				
Karachi	May 16-June 26	44	18	
Do	June 27-Oct 2	14	7	
Madras	May 16-June 26	7	4	
Do	June 27-Oct 23	78	21	
Rangoon	May 9-June 26	10	5	
Do	July 4-Sept 11	21	4	
Indo-China				
Saigon	May 9-June 26	2		
Iraq				
Baghdad	do	8	3	
Do	July 4-Sept 11	3	1	
Basra	Apr 18-June 22	34	25	
Do	Aug 15-21	1		
Italy				Mar 28-June 26, 1926. Cases, 34; June 27-July 31, 1926 Cases, 11.
Catania	Aug 9-15	2		
Rome	June 14-20	4		Entire consular district, including island of Sardinia
Jamaica				Apr 25-June 26, 1926 Cases, 201. (Reported as alastrim)
Do				June 27-Oct 30, 1926 Cases, 227. (Reported as alastrim)
Japan				Apr 11-June 26, 1926 Cases, 658, June 27-Aug 28, 1926 Cases, 70.
Kobe	May 30-June 5	1		
Nagoya	May 16-June 22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-June 25	2		Province
Do	July 24-Oct 16	17		Do
East Java and Madura	Apr. 11-July 3	100	6	
Do	July 4-Oct 2	61	3	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Do	July 18-Sept 25	143	8	
Latvia				Apr 1-June 30, 1926 Cases, 5
Mexico				Feb 1-June 30, 1926 Deaths, 1,525
Aguascalientes	June 13-26		3	
Guadalajara	June 8-14		2	
Do	June 20-Sept 27		8	
Mexico City	May 16-June 5	3		Including municipalities in Federal District
Do	July 25-Sept 25	6		Do.
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present, 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-Nov 13		23	
Torreon	May 1-June 30		17	
Do	July 1-Oct 23		14	
Netherlands:				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-June 30, 1926 Cases, 521; deaths, 49
Persia				
Teheran	Apr 21-July 23		10	
Peru.				
Arequipa	June 1-30		1	
Poland				Mar 28-May 1, 1926. Cases, 12; deaths, 1 June 27-Sept 11, 1926 Cases, 416, deaths, 1
Portugal:				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Nov 6	35	7	
Oporto	May 23-June 5	4		
Do	July 11-24	2		
Russia				Jan. 1-Apr 30, 1926 Cases, 2,529.
Siam				Apr 1-Oct 2, 1926 Cases, 590; deaths, 236.
Bangkok	May 2-June 12	28	20	
Do	July 4-Oct. 2	77	60	
Spain				Jan 1-June 30, 1926 Deaths, 99.
Valencia	Aug. 22-Oct 23	3		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 3, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Straits Settlements				
Singapore	Apr 25–May 1	1		
Do	July 11–17	1		
Sumatra				
Medan	Aug 22–28			1 case varioloid.
Switzerland				
Lucerne Canton	June 1–30	1		
Do	July 1–31	2		
Tripolitania	Apr 1–June 30	12		
Tunisia				Apr 1–June 30, 1926 Cases, 17 July 1–Sept 30, 1926 Cases, 38
Tunis	Aug 11–30	2		
Union of South Africa	June 1–30	8	1	
Cape Province	June 20–26			Outbreaks
Do	Aug 15–21			Do
Idutywa district	May 23–29			Do
Natal	May 30–June 5			Do
Orange Free State	June 20–Aug 28			Do
Transvaal				June 6–12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Do	Aug 29–Sept 4	1		Native
Johannesburg	May 9–June 12	5		
Do	July 11–Sept 25	4		
Pretoria	Sept 19–25	1		
Yugoslavia				Apr 15–30, 1926 Cases, 2, deaths, 1
Zagreb	Aug 9–15	2		
On vessels				
S. S Karapara				At Zanzibar, June 7, 1926 1 case of smallpox landed At Durban, Union of South Africa, June 16, 1926 1 suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow, removed at quarantine on outward voyage

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				July 21–Sept 20, 1926 Cases, 34, deaths, 1.
Algiers	May 21–June 30	7	1	
Do	July 21–Aug 31	3		
Argentina				
Rosario	Feb 1–28	2		
Bolivia				
La Paz	June 1–30		1	
Do	Aug 1–31	9	1	
Bulgaria				Mar 1–June 30, 1926 Cases, 87; deaths, 14
Chile				
Antofagasta	May 23–June 26	4		
Do	June 27–July 3	1		
Concepcion	June 1–7		1	
Valparaiso	Apr 29–May 5		1	
Do	Aug 14–Sept 18	7		
China				
Antung	June 14–27	7	1	
Do	June 28–Oct 24	42	1	
Canton	May 1–31	1		
Chungking	Aug 29–Sept 4			Present
Ichang			1	Reported May 1, 1926 Occurring among troops
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1–June 30, 1926 Cases, 1,005, deaths, 112 July 1–31, 1926 Cases, 37, deaths, 6.
Chemulpo	May 1–June 30	38	2	
Do	July 1–31	7	2	
Gensan	June 1–30	1		
Seoul	do	8	3	
Do	July 1–Aug 31	8		
Czechoslovakia				Jan 1–June 30, 1926: Cases, 156; deaths, 6

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 3, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Egypt:				
Alexandria	July 16–Aug 19	3		
Do	Oct 1–7	1	1	
Cairo	Jan 29–May 13	89	27	
Do	July 23–Aug 5	1		
Port Said	June 4–24	4	1	
Do	July 9–Oct 7	5	1	
France	Aug 1–31	5		
Great Britain				
Scotland—				
Glasgow	July 30–Aug 21	9	1	
Greece				
Athens	Sept 1–30		17	Including Piræus.
Hungary	May 1–June 30	3		
Ireland (Irish Free State)				
Cobh (Queenstown)	May 30–June 5	1		
Do	June 27–Aug 23	2	1	
Cork	June 5	1		
Cork County	Oct 17–23	1		
Kerr County—				
Dingle	June 27–July 3	1		
Italy				Mar 28–May 8, 1926 Cases, 3
Palermo	Sept 12–18	1		
Japan				Mar 28–May 29, 1926 Cases, 37
Latvia				May 1–June 30, 1926 Cases, 19 Aug 1–31, 1926 Cases, 2
Lithuania				Mar. 1–June 30, 1926 Cases, 199, deaths, 22 July 1–Aug 31, 1926 Cases, 23
Mexico				Feb 1–June 30, 1926 Deaths, 189
Durango	July 1–31		1	
Mexico City	May 16–June 5	20		Including municipalities in Federal District
Do	June 13–19	9		Do
Do	July 25–31	3		Do
Do	Aug 15–Oct. 30	69		Do
San Luis Potosi	June 13–26			Present, city and country
Morocco				Mar 1–June 30, 1926 Cases, 426 July 1–Aug 31, 1926 Cases 20
Norway				
Stavanger	Sept 6–12	1		
Palestine				Mar. 1–June 30, 1926 Cases, 14, deaths, 1 Aug 1–Oct 25, 1926 Cases, 22
Gaza	July 6–12	1		
Haifa	July 13–Aug 30	5		
Halelal	Aug 17–23	1		
Jaffa district	June 15–28	5		
Do	Sept 28–Oct 25	2		
Jerusalem	Sept 14–27	2		
Majdal district	July 13–Aug. 2	2		
Nazareth district	do	3		
Petah Tokvah	Oct 5–11	3		
Tiberias	Aug 3–9	1		
Yavneil	Aug. 17–23	1		
Persia.				
Teheran	May 23–June 22		1	
Peru.				
Arequipa	Jan. 1–31		2	
Poland				Mar 28–June 26, 1926: Cases, 1,272, deaths, 85 June 27–Sept 18, 1926 Cases, 294; deaths, 22
Rumania				Mar. 1–June 30, 1926: Cases, 899, deaths, 83. July 1–31, 1926 Cases, 65, deaths, 9.
Russia				Jan 1–Apr 30, 1926 Cases, 18,647
Spain	Jan 1–June 30		13	
Tunisia				Apr 1–June 30, 1926 Cases, 110 July 1–Sept 20, 1926. Cases, 101.
Tunis	June 11–30	3		
Turkey				
Constantinople	June 16–22	1		
Union of South Africa				Apr. 1–May 31, 1926: Cases, 153, deaths, 19.
Do				July 1–31, 1926. Cases, 90, deaths, 12.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 3, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa—Con				
Cape Province				Apr 1-June 30, 1926 Cases, 202, deaths, 24, native July 1-31, 1926 Cases [illegible], deaths, [illegible]
Glengray district	June 27-July 3			Outbreaks
Grahamstown	do	1		
Natal				Apr 1-June 30, 1926 Cases, 28 July 1-31, 1926 Cases 23, deaths, 2
Durban	July 25-Sept 18	11	1	
Orange Free State				Apr 1-June 30, 1926 Cases, 24, deaths, 4 July 1-31, 1926 Cases, 7
Transvaal				Apr 1-June 30, 1926 Cases 10 deaths 3 July 1-31, 1926 Cases, 2 Aug 15-21, 1926, outbreaks
Johannesburg	Aug 29-Sept 4	1		Outbreaks
Wakkerstroom district	June 20-26			Do
Wolmaranstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 18; deaths, 7 July 1-Aug 31, 1926 Cases, 3, deaths, 1
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr 1-June 30	8	4	
Nigeria	June 1-30	1	1	

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SPECIAL ARTICLE

The Control of Communicable Diseases

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1926

UNITED STATES PUBLIC HEALTH SERVICE

HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C C. PIERCE, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912.

They contain: (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world. (2) Articles relating to the cause, prevention, or control of disease. (3) Other pertinent information regarding sanitation and the conservation of the public health.

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CONTENTS

PUBLIC HEALTH REPORTS

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THE CONTROL OF COMMUNICABLE DISEASES

REPORT OF THE AMERICAN PUBLIC HEALTH ASSOCIATION COMMITTEE ON STANDARD REGULATIONS, APPOINTED IN OCTOBER, 1916

In the following report the terms used are first defined. Each disease is briefly described with regard to the infective agent, the source of infection, the mode of transmission, the incubation period, and the period of communicability Following this are given the methods of control—first, those affecting the individual patient and his immediate environment, and, second, general measures bearing upon the control or prevention of the disease in question.

Inasmuch as the laws under which various boards and departments of health operate require differences in the legal phraseology of rules, regulations, or sections of sanitary codes dealing with the control of communicable diseases, the committee has refrained from preparing formal regulations under each disease. As the report is at present submitted any health officer, board of health, or legislative body having the power to make rules or regulations or pass sections of sanitary codes dealing with the control of communicable diseases can, by reference to the description of the disease and recommendations for methods of control herewith proposed, easily prepare the necessary text upon which the educational and administrative acts of the health officer will be based.

The committee is indebted for expert opinion and critical comment upon its tentative conclusions to Dr. Simon Flexner, Dr. William H. Park, Prof. Theobald Smith, and Dr. Bertram H. Waters, and acknowledgment of their contributions to the report in its present form is herewith gratefully expressed.

HAVEN EMERSON, M. D., *Chairman.*
ROBERT N. HOYT.
F. M. MEADER, M. D.
J. C. PERRY, M. D.
C.-E. A. WINSLOW, Dr P. H.

This revised report of the committee on control of communicable diseases was presented before the public health administration section at the fifty-fifth annual meeting of the American Public Health Association at Buffalo, N. Y., on October 11, 1926. Publication of the revised report was approved by the governing council of the association on October 14, 1926.

The committee acknowledges gratefully the collaboration of the following physicians who generously contributed to the present revised text: Doctors Charles V. Chapin, Edwin O. Jordan, William H. Park, J F. Anderson, E C. Levy, E. S. Godfrey, and certain medical officers of the Public Health Service.

HAVEN EMERSON, M. D., *Chairman.*
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This revised report of the committee on control of communicable diseases is officially approved by the United States Public Health Service.

List of Diseases

Actinomycosis.
Acute infectious conjunctivitis.
Anchylostomiasis (hookworm).
Anthrax.
Chicken pox.
Cholera.
Dengue.
Diphtheria.
Dysentery (amoebic).
Dysentery (bacillary).
Epidemic (lethargic) encephalitis.
Favus.
German measles.
Glanders.
Gonorrhea.
Influenza.
Leprosy.
Malaria.
Malta fever.
Measles.
Meningococcus meningitis.
Mumps
Paratyphoid fever.
Plague.
Pneumonia (acute lobar).
Poliomyelitis
Rabies
Rocky Mountain spotted or tick fever.
Scarlet fever.
Septic sore throat.
Smallpox.
Syphilis
Tetanus.
Trachoma
Trichinosis
Tuberculosis (pulmonary).
Tuberculosis (other than pulmonary).
Tularæmia.
Typhoid fever
Typhus fever.
Whooping cough.
Yellow fever.

The committee adopted the following definitions of terms:

1. *Carrier*.—A person who, without symptoms of a communicable disease, harbors and disseminates the specific microorganisms.

2. *Cleaning*.—This term signifies the removal by scrubbing and washing, as with hot water, soap, and washing soda, of organic matter on which and in which bacteria may find favorable conditions for prolonging life and virulence; also the removal by the same means of bacteria adherent to surfaces.

3. *Contact*.—A "contact" is any person or animal known to have been sufficiently near to an infected person or animal to have been presumably exposed to transfer of infectious material directly, or by articles freshly soiled with such material.

4. *Delousing*.—By delousing is meant the process by which a person and his personal apparel are treated so that neither the adults nor the eggs of Pediculus corporis or Pediculus capitis survive.

5. *Disinfection*.—By this is meant the destroying of the vitality of pathogenic microorganisms by chemical or physical means.

When the word *concurrent* is used as qualifying disinfection, it indicates the application of disinfection immediately after the discharge of infectious material from the body of an infected person, or after the soiling of articles with such infectious discharges, all personal contacts with such discharges or articles being prevented prior to their disinfection.

When the word *terminal* is used as qualifying disinfection, it indicates the process of rendering the personal clothing and immediate physical environment of the patient free from the possibility of conveying the infection to others, at the time when the patient is no longer a source of infection.

6. *Disinfesting*.—By disinfesting is meant any process, such as the use of dry or moist heat, gaseous agents, poisoned food, trapping, etc., by which insects and animals known to be capable of conveying or transmitting infection may be destroyed.

7. *Education in personal cleanliness*.—This phrase is intended to include all the various means available to impress upon all members of the community, young and old, and especially when communicable disease is prevalent or during epidemics, by spoken and printed word, and by illustration and suggestion, the necessity of

(1) Keeping the body clean by sufficiently frequent soap and water baths.

(2) Washing hands in soap and water after voiding bowels or bladder and always before eating.

(3) Keeping hands and unclean articles, or articles which have been used for toilet purposes by others, away from mouth, nose, eyes, ears, and vagina.

(4) Avoiding the use of common or unclean eating, drinking, or toilet articles of any kind, such as towels, handkerchiefs, hair brushes, drinking cups, pipes, etc.

(5) Avoiding close exposure of persons to spray from the nose and mouth, as in coughing, sneezing, laughing, or talking.

8. *Fumigation*.—By fumigation is meant a process by which the destruction of insects, as mosquitoes and body lice, and animals, as rats, is accomplished by the employment of gaseous agents.

9. *Isolation*.[1]—By isolation is meant the separating of persons suffering from a communicable disease, or carriers of the infecting organism, from other persons, in such places and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to susceptible persons.

10. *Quarantine*.[1]—By quarantine is meant the limitation of freedom of movement of persons or animals who have been exposed to communicable disease for a period of time equal to the longest usual incubation period of the disease to which they have been exposed.

11. *Renovation*.—By renovation is meant, in addition to cleansing, such treatment of the walls, floors, and ceilings of rooms or houses as may be necessary to place the premises in a satisfactory sanitary condition.

12. *Report of a disease*.—By report of a disease is meant the notification to the health authorities, and, in the case of communicable disease in animals, also to the respective departments of agriculture which have immediate jurisdiction, that a case of communicable disease exists in a specified person or animal at a given address.

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[1] In view of the various ambiguous and inaccurate uses to which the words isolation and quarantine are not infrequently put, it has seemed best to adopt arbitrarily the word isolation as describing the limitation put upon the movements of the known sick or "carrier" individual or animal, and the word quarantine as describing the limitations put upon exposed or "contact" individuals.

13. *Susceptibles* —A susceptible is a person or animal who is not known to have become immune to the particular communicable disease in question by natural or artificial process

The items considered necessary for presentation by the committee with regard to each disease are the following:

1. Infective agent.
2. Source of infection
3. Mode of transmission
4. Incubation period.
5. Period of communicability.
6. Methods of control
   (A) The infected individual and his environment:
      1 Recognition of the disease.
      2 Isolation.
      3 Immunization
      4. Quarantine.
      5. Concurrent disinfection.
      6. Terminal disinfection
   (B) General measures.
   (C) Epidemic measures (occasionally require separate mention).

IMPORTANT MEASURES IN BOLD-FACED TYPE

Certain measures in the control of some diseases are of particular importance, on account either of their efficiency in preventing the disease or of the danger if they are neglected, and also on account of their proven practicability. These are emphasized in the text by **being printed in bold-faced type.**

Actinomycosis

1. *Infective agent.*—*Actinomyces bovis*
2. *Source of infection* —The nasal and bowel discharges, and the infected material from lesions in human and animal cases of the disease Uncooked meat from infected animals may serve as a source of infection.
3. *Mode of transmission.*—By contact with the discharges or with articles freshly soiled with the discharges from animal or human cases.
4. *Incubation period.*—Unknown.
5. *Period of communicability.*—As long as open lesions remain, as proved by the presence of the infective agent on microscopic or cultural tests.
6. *Methods of control.*
   (A) The infected individual and his environment—
      1. **Recognition of the disease**—Clinical symptoms, confirmed by microscopic examination of discharges from the lesions.
      2. Isolation—None, provided the patient is under adequate medical supervision
      3. Immunization.—None.
      4 Quarantine.—None.
      5. Concurrent disinfection.—Of discharges from lesions and articles soiled therewith.
      6. Terminal disinfection.—By thorough cleaning.
   (B) General measures—
      1. **Inspection of meat, with condemnation of carcasses, or infected parts of carcasses, of infected animals.**
      2. **Destruction of known animal sources of infection.**

Acute Infectious Conjunctivitis

(Not including trachoma)

(This title to replace the terms gonorrheal ophthalmia, ophthalmia neonatorum, and babies' sore eyes)

1. *Infectious agent* —The gonococcus or some member of a group of pyogenic organisms, including the hemoglobinophilic bacilli
2. *Source of infection* —Discharges from conjunctivæ, or adnexa, or genital mucous membranes of infected persons.
3. *Mode of transmission* —Contact with an infected person or with articles freshly soiled with discharges of such person
4. *Incubation period.*—Irregular, but usually 36 to 48 hours.
5. *Period of communicability.*—During the course of the disease and until the discharges from the infected mucous membranes have ceased.
6. *Methods of control*·
   - (A) The infected individual and his environment—
     1. Recognition of the diseases—Clinical symptoms, confirmed where possible by bacteriological examination
     2. Isolation—None, provided the patient is under adequate medical supervision.
     3. Immunization—None
     4. Quarantine—None
     5. **Concurrent disinfection—Disinfection of conjunctival discharges and articles soiled therewith.**
     6. Terminal disinfection—Thorough cleansing
   - (B) General measures—
     1. Enforcement of regulations forbidding the use of common towels and toilet articles Education as to personal cleanliness.
     2. **Use of silver nitrate or some similar solution in the eyes of the new born.**
     3. Carrying out of the measures indicated on methods of control for gonorrhea.

Anchylostomiasis

(Hookworm)

1. *Infectious agent.*—Anchylostoma (*Necator americanus*).
2. *Source of infection.*—Feces of infected persons Infection generally takes place through the skin, occasionally by the mouth.
3. *Mode of transmission* —The larval forms pierce the skin, usually of the foot, and passing through the lymphatics to the vena cava and the right heart, thence in the blood stream to the lungs, they pierce the capillary walls and pass into the alveoli Then they pass up the bronchi and trachea to the throat, whence they are swallowed and finally lodge in the small intestine. Also by drinking water containing larvæ, by eating soiled food, by hand to mouth transmission of the eggs or larvæ from objects soiled with infected discharges. The chief reservoir of infectious material is *contaminated soil.*
4. *Incubation period.*—Seven to ten weeks
5. *Period of communicability.*—As long as the parasite or its ova are found in the bowel discharges of an infected individual. Contaminated soil remains infective for five months in the absence of freezing.

6. *Methods of control:*
   (A) The infected individual and his environment—
      1. Recognition of the disease—Microscopic examination of bowel discharges
      2 Isolation—None
      3. Immunization—None.
      4 Quarantine—None.
      5 Concurrent disinfection—Sanitary disposal of bowel discharges to prevent contamination of soil and water.
      6. Terminal disinfection—None
      7 Treatment—Appropriate treatment of infected individual to rid the intestinal canal of the parasite and its ova.
   (B) General measures—
      1. Education as to dangers of soil pollution
      2. Prevention of soil pollution by installation of sanitary disposal systems for human discharges
      3. Personal prophylaxis by cleanliness and the wearing of shoes.

Anthrax

1. *Infectious agent*.—Anthrax bacillus, *Bacillus anthracis*.
2. *Source of infection*.—Hair, hides, flesh, and feces of infected animals
3. *Mode of transmission*.—Inoculation as by accidental wound or scratch, inhalation of spores of the infectious agent, and ingestion of insufficiently cooked infected meat.
4. *Incubation period*.—Within seven days.
5. *Period of communicability*.—During the febrile stage of the disease and until lesions have ceased discharging. Infected hair and hides of infected animals may communicate the disease for many months after slaughter of the animal, and after curing of hide, fur, or hair, unless disinfected.
6. *Methods of control:*
   (A) The infected individual and his environment—
      1. Recognition of the disease—Clinical symptoms, confirmed by bacteriological examination.
      2. Isolation of the infected individual until the lesions have healed.
      3. Immunization—None.
      4. Quarantine—None.
      5. Concurrent disinfection of the discharges from lesions and articles soiled therewith
      6. Terminal disinfection—Thorough cleaning.
   (B) General measures—
      1. Animals ill with a disease presumably anthrax should be placed immediately in the care of a veterinary surgeon. Proved animal cases of the disease should be killed promptly and the carcasses destroyed, preferably by fire.
      2. Isolation of all animals affected with the disease.
      3. Immunization of exposed animals under direction of Federal or State Department of Agriculture.
      4. Post-mortem examinations should be made only by a veterinary surgeon, or in the presence of one.
      5. Milk from an infected animal should not be used during the febrile period.

6. *Methods of control*—Continued.

(B) General measures—Continued.

6. Control and disinfection of effluents and trade wastes and of areas of land polluted by such effluents and wastes from factories or premises, where spore-infected hides or other infected hide and hair products are known to have been worked up into manufactured articles.
7. A physician should be constantly employed by every company handling rawhides, or such companies should operate under the direct supervision of a medical representative of the health department
8. Every employee handling rawhides, hair, or bristles who has an abrasion of the skin should immediately report to a physician.
9. Special instruction should be given to all employees handling rawhides in regard to the necessity of personal cleanliness.
10. Tanneries and woolen mills should be provided with proper ventilating apparatus so that dust can be promptly removed
11. Disinfection of hair, wool, and bristles of animals originating in known infected centers before they are used or assorted
12. The sale of hides from an animal infected with anthrax should be prohibited. A violation of this regulation should be immediately reported to the State commissioner of agriculture, by telegram, stating the time, place, and purchaser to whom the hide was sold The report should also be sent to the person purchasing the hide Carcasses should be disposed of under the supervision of the State department of agriculture. The inspection and disinfection of imported hides are under the supervision of the United States Bureau of Animal Industry. In the event that infection is introduced the State agricultural authorities have jurisdiction over infected animals and the local or State health authorities have jurisdiction over infected persons.

Chicken Pox

1. *Infectious agent.*—Unknown.
2. *Source of infection.*—The infectious agent is presumably present in the lesions of the skin and of the mucous membranes; the latter appearing early and rupturing as soon as they appear, render the disease communicable early, that is, before the exanthem is in evidence.
3. *Mode of transmission.*—Directly from person to person; indirectly through articles freshly soiled by discharges from an infected individual.
4. *Incubation period.*—Two to three weeks.
5. *Period of communicability.*—Until the primary scabs have disappeared from the mucous membranes and the skin
6. *Methods of control:*

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms. **The chief public health importance of this disease is that cases thought to be chicken pox in persons over 15 years of age, or at any age during an epidemic of smallpox, are to be investigated to eliminate the possibility of their being smallpox.**
2. Isolation—Exclusion of patient from school, and prevention of contact with nonimmune persons.
3. Immunization—None.

Methods of control—Continued

(A) The infected individual and his environment—Continued.

4. Quarantine—None

5. Concurrent disinfection of articles soiled by discharges from lesions

6 Terminal disinfection—Thorough cleaning.

(B) General measures—None.

Cholera

1. *Infectious agent*—Cholera vibrio, *Vibrio comma.*
2. *Source of infection.*—Bowel discharges and vomitus of infected persons, and feces of convalescent or healthy carriers. Ten per cent of contacts may be found to be carriers.
3. *Mode of transmission*—By food and water polluted by infectious agent; by contact with infected persons, carriers, or articles freshly soiled by their discharges, by flies
4. *Incubation period*—One to five, usually three days, occasionally longer if the healthy carrier stage, before development of symptoms, is included.
5. *Period of communicability.*—Usually 7 to 14 days or longer and until the infectious organism is absent from the bowel discharges.
6. *Methods of control:*

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms, confirmed by bacteriological examination.
2. Isolation of patient in hospital or screened room
3. Immunization by vaccination may be of value
4. Quarantine—Contacts for five days from last exposure, or longer if stools are found to contain the cholera vibrio.
5. Concurrent disinfection—Prompt and thorough disinfection of the stools and vomited matter. Articles used by and in connection with the patient must be disinfected before removal from the room. Food left by the patient should be burned
6 Terminal disinfection—Bodies of those dying from cholera should be cremated if practicable, or, otherwise, wrapped in a sheet wet with disinfectant solution and placed in water-tight caskets. The room in which a sick patient was isolated should be thoroughly cleaned and disinfected

(B) General measures—

1. Rigid personal prophylaxis of attendants by scrupulous cleanliness, disinfection of hands each time after handling patient or touching articles contaminated by dejecta, the avoidance of eating or drinking anything in the room of the patient, and the prohibition of those attendant on the sick from entering the kitchen
2. The bacteriological examination of the stools of all contacts to determine carriers Isolation of carriers.
3. Water should be boiled, if used for drinking or toilet purposes, or if used in washing dishes or food containers, unless the water supply is adequately protected against contamination or is so treated, as by chlorination, that the cholera vibrio can not survive in it.

6. *Methods of control*—Continued.
   (B) General measures—Continued.
      4. **Careful supervision of food and drink. Where cholera is prevalent, only cooked foods should be used. Food and drink after cooking or boiling should be protected against contamination, as by flies and human handling.**
   (C) Epidemic measures—
      Inspection service for early detection and isolation of cases; examination of persons exposed in infected centers for detection of carriers, with isolation or control of carriers; disinfection of rooms occupied by the sick, and the detention, in suitable camps for five days, of those desirous of leaving for another locality. Those so detained should be examined for detection of carriers.

Dengue

1. *Infectious agent*.—Unknown.
2. *Source of infection*.—The blood of infected persons.
3. *Mode of transmission*.—By the bite of infected mosquitoes, *Aedes ægypti*.
4. *Incubation period*.—Three to ten days.
5. *Period of communicability*.—From the day before onset to the fifth day of the disease.
6. *Methods of control*.
   (A) The infected individual and his environment—
      1. Recognition of the disease—Clinical symptoms.
      2. Isolation—The patient must be kept in a screened room.
      3. Immunization—None.
      4. Quarantine—None.
      5. Concurrent disinfection—None.
      6. Terminal disinfection—None. Upon termination of the case, fumigation of the room and house, to destroy mosquitoes.
   (B) General measures—
      Measures directed toward elimination of mosquitoes (Aedes ægypti). Screening of rooms.

Diphtheria

1. *Infectious agent*.—Diphtheria bacillus, *Corynebacterium diphtheriæ*, the Klebs-Loeffler bacillus.
2. *Source of infection*.—Discharges from diphtheritic lesions of nose, throat, conjunctiva, vagina, and wound surfaces. Secretions from the nose and throat of carriers of the bacillus.
3. *Mode of transmission*.—Directly by personal contact, indirectly by articles freshly soiled with discharges, or through infected milk or milk products.
4. *Incubation period*.—Usually two to five days, occasionally longer if a healthy carrier stage precedes the development of clinical symptoms.
5. *Period of communicability*.—Until virulent bacilli have disappeared from the secretions and the lesions. The persistence of the bacilli after the lesions have healed is variable. In fully three-fourths of the cases they disappear within two weeks. In 95 per cent of cases, the bacilli disappear in four weeks. In exceptional cases virulent bacilli remain in the throat and discharges for from two to six months.

6. *Methods of control.*

(A) The infected individual and his environment—

1 Recognition of the disease—By clinical symptoms with confirmation by bacteriological examination of discharges.

2 Isolation—Until two cultures from the throat and two from the nose, taken not less than 24 hours apart, fail to show the presence of diphtheria bacilli. Isolation may be terminated if persistent diphtheria bacilli prove avirulent. Where termination by culture is impracticable, cases may be terminated with fair safety as a rule 16 days after onset of the disease.

3. Immunization—Exposed susceptibles who can not be kept under daily observation by a physician or nurse should be promptly immunized by antitoxin. (By susceptibles is meant such individuals as are found to be nonimmune by the Schick test, i. e , those who give a positive reaction.)

4. Quarantine—All exposed persons until shown by bacteriological examination not to be carriers.

5. Concurrent disinfection of all articles which have been in contact with the patient and all articles soiled by discharges from the patient.

6. Terminal disinfection—At the end of the illness, thorough airing and sunning of the sick room, with cleaning or renovation.

(B) General measures—

1. Pasteurization of milk supply.

2. Application of the Schick test to all especially exposed persons, such as nurses and physicians, and active immunization of all susceptibles, but not within three weeks after the administration of antitoxin.

3 Active immunization of all children by the end of the first year without prior Schick testing, active immunization of school children with or without prior use of the Schick test.

4. Determination of presence or absence of carriers among contacts and, so far as practicable, in the community at large.

Dysentery (Amœbic)

1. *Infectious agents.—Endamœba histolytica.*

2. *Source of infection.*—The bowel discharges of infected persons.

3. *Mode of transmission* —By drinking contaminated water, and by eating infected foods, and by hand-to-mouth transfer of infected material; from objects soiled with discharges of an infected individual, or of a carrier; by flies

4. *Incubation period.*—Unknown

5. *Period of communicability.*—During course of disease and until repeated microscopic examination of stools shows absence of Amœba histolytica.

6. *Methods of control.*—

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms, confirmed by microscopic examination of stools.

2. Isolation—None

3. Immunization—None.

4. Quarantine—None.

5. Concurrent disinfection of the bowel discharges.

6. Terminal disinfection—Cleaning.

6. *Methods of control*—Continued.
   (B) General measures—
      1. Boil drinking water unless the supply is known to be free from contamination.
      2. Water supply should be protected against contamination, and supervision should be exercised over all foods eaten raw.

Dysentery (Bacillary)

1. *Infectious agent.*—Dysentery bacillus, *Eberthella dysenteriæ, Eberthella para dysenteriæ.*
2. *Source of infection.*—The bowel discharges of infected persons.
3. *Mode of transmission.*—By drinking contaminated water, by eating infected foods, and by hand-to-mouth transfer of infected material; from objects soiled with discharges of an infected individual or of a carrier, by flies.
4. *Incubation period.*—Two to seven days.
5. *Period of communicability.*—During the febrile period of the disease and until the organism is absent from the bowel discharges.
6. *Methods of control.*—
   (A) The infected individual and his environment—
      1. Recognition of the disease—Clinical symptoms, confirmed by serological and bacteriological tests.
      2. Isolation—Infected individuals during the communicable period of the disease.
      3. Immunization—Vaccines give considerable immunity. Owing to severe reactions their use is not universal, nor should it be made compulsory except under extreme emergency.
      4. Quarantine—None.
      5. Concurrent disinfection—Bowel discharges.
      6. Terminal disinfection—Cleaning.
   (B) General measures—
      1. Rigid personal prophylaxis of attendants upon infected persons.
      2. No milk or food for human consumption should be sold from a place occupied by a patient unless the persons engaged therein occupy quarters separate from the house where the patient is sick, and all utensils used are cleaned and kept in a separate building and under a permit from the health officer.
      3. All attendants upon persons affected with this disease should be prohibited from having anything to do with the handling of food.
      4. Necessary precautions against flies.
      5. Careful supervision of food and drink. Where dysentery is prevalent, only cooked foods should be used. Food and drink after cooking or boiling should be protected against contamination, as by flies and human handling.

Epidemic (Lethargic) Encephalitis

1. *Infectious agent.*—Unknown.
2. *Source of infection.*—Probably discharges from the nose and throat of infected persons, or articles freshly soiled therewith. It is supposed that there are healthy carriers during prevalence of the disease.
3. *Mode of transmission.*—Probably by direct contact with an infected person or a carrier of the virus, or by contact with articles freshly soiled with the discharges of the nose or throat of such persons.

4 *Incubation period*—Undetermined Believed to be about 10 days.
5 *Period of communicability*—Probably during the febrile stage of the disease.
6 *Methods of control*—
(A) The infected individual and his environment—
1 Recognition of the disease, by clinical symptoms
2 Isolation of recognized cases for one week after onset.
3 Immunization—None.
4 Quarantine—None.
5. Concurrent disinfection—Discharges of the nose and throat and articles soiled therewith.
6 Terminal disinfection—Cleaning
(B) General measures—
1. Search for and examination of cases during periods of prevalence.
2 Isolation of suspected febrile cases pending diagnosis.

Favus

1 *Infectious agent.*—*Achorion schoenleinii.*
2. *Source of infection.*—Lesions of skin, particularly on scalp.
3. *Mode of transmission.*—Direct contact with patient, and indirectly through toilet articles.
4. *Incubation period.*—Unknown.
5. *Period of communicability.*—Until skin and scalp lesions are all healed
6. *Methods of control:*
(A) The infected individual and his environment—
1. Recognition of the disease—Clinical symptoms confirmed by microscopic examination of crusts.
2 Isolation—Exclusion of patient from school and other public places until lesions are healed.
3. Immunization—None.
4. Quarantine—None.
5. Concurrent disinfection—Toilet articles of patient.
6. Terminal disinfection—None.
(B) General measures—
1. Elimination of common utensils, such as hair brushes and combs.
2. Provision for adequate and intensive treatment and cure of cases of favus at hospitals and dispensaries, to abbreviate the period of infectivity of the patients.

German Measles (Rubella)

1. *Infectious agent.*—Unknown
2. *Source of infection*—Secretions of the mouth and possibly of the nose.
3. *Mode of transmission.*—By direct contact with the patient or with articles freshly soiled with the discharges from the nose or throat of the patient.
4. *Incubation period.*—From 14 to 21 days.
5. *Period of communicability.*—Eight days from onset of the disease.
6. *Methods of control*·
(A) The infected individual and his environment—
1. Recognition of the disease—Clinical symptoms.
2. Isolation—Separation of the patient from nonimmune children, and exclusion of the patient from school and public places for the period of presumed infectivity.
3. Immunization—None.
4. Quarantine—None.

6. *Methods of control*—Continued.

(A) The infected individual and his environment—Continued.

5. Concurrent disinfection—Discharges from the nose and throat of the patient and articles soiled by discharges.

6. Terminal disinfection—Airing and cleaning

(B) General measures—None.

NOTE —The reason for attempting to control this disease is that it may be confused with scarlet fever during its early stages, each person having symptoms of the disease should therefore be placed under the care of a physician and the case should be reported to the local department of health

Glanders

1. *Infectious agent*—Glanders bacillus, *Pfefferella mallei*.
2. *Source of infection*.—Discharges from open lesions of mucous membranes or of the skin of human or equine cases of the disease i e, pus and mucus from the nose, throat, and bowel discharges from infected man and horse
3. *Mode of transmission*—Contact with a case or with articles freshly soiled by discharges from a human or equine case.
4. *Incubation period*.—Unknown.
5. *Period of communicability*—Until bacilli disappear from discharges or until lesions have healed
6. *Methods of control*

(A) The infected individual and his environment—

1. Recognition of the disease—By specific biological reactions, such as the complement fixation test, the mallein test, the agglutination test, or by nonspecific reactions, such as the Straus reaction, if confirmed by culture, or by identification of the *Bacillus mallei*, or by autopsy of doubtful cases
2. Isolation—Human case at home or hospital; for infected horses destruction rather than isolation is advised Skin contact with the lesions in the living or dead body is to be scrupulously avoided.
3. Immunization—None of established value or generally accepted.
4. Quarantine of all horses in an infected stable until all have been tested by specific reaction, and the removal of infected horses and terminal disinfection of stable have been accomplished.
5. Concurrent disinfection—Discharges from human cases and articles soiled therewith.
6. Terminal disinfection—Stables and contents where infected horses are found.

(B) General measures—

1. The abolition of the common drinking trough for horses.
2. Sanitary supervision of stables and blacksmith shops
3. Semiannual testing of all horses by a specific reaction where the disease is common.
4. Testing of all horses offered for sale where the disease is common.

NOTE —In this disease, as in all infectious or communicable diseases from which both animals and humans suffer, cases occurring in animals should be reported to the Department of Agriculture and human cases should be reported to the Department of Health, reciprocal notification thereafter to be accomplished through official interdepartment channels.

Gonorrhea

1. *Infectious agent*.—Gonococcus, *Neisseria gonorrhœæ*.
2. *Source of infection*—Discharges from lesions of inflamed mucous membranes and glands of infected persons, viz, urethral, vaginal, cervical, conjunctival mucous membranes, and Bartholin's or Skene's glands in the female, and Cowper's and the prostate glands in the male.

3. *Mode of transmission.*—By direct personal contact with infected persons, and indirectly by contact with articles freshly soiled with the discharges of such persons.
4. *Incubation period.*—One to eight days, usually three to five days
5. *Period of communicability*—As long as the gonococcus persists in any of the discharges, whether the infection be an old or a recent one.
6. *Methods of control.*
   - (A) The infected individual and his environment—
     1. Recognition of the disease—Clinical symptoms, confirmed by bacteriological examination or serum reaction.
     2. Isolation—When the lesions are in the genito-urinary tract, exclusion from sexual contact, and when the lesions are conjunctival, exclusion from school or contact with children, as long as the discharges contain the infecting organism.
     3. Immunization—None.
     4. Quarantine—None
     5. Concurrent disinfection—Discharges from lesions and articles soiled therewith.
     6. Terminal disinfection—None.
   - (B) General measures—
     1. Education in matters of sexual hygiene, particularly as to the fact that continence in both sexes at all ages is compatible with health and normal development.
     2. Provision for accurate and early diagnosis, and treatment in hospitals and dispensaries of infected persons, with consideration for privacy of record and provision for following cases until cured.
     3. Repression of prostitution by use of police power and control of use of living premises
     4. Restriction of sale of alcoholic beverages.
     5. Restrictions of advertising of services or medicines for the treatment of sex diseases, etc
     6. Elimination of common towels and toilet articles from public places.
     7. Use of prophylactic silver solution in the eyes of the new b[illegible]n.
     8. Exclusion of persons in the communicable stage of the disease from participation in the preparing and serving of food
     9. Personal prophylaxis should be advised to those who expose themselves to opportunity for infection.

Influenza

1. *Infectious agent*—Undetermined.
2. *Source of infection.*—Probably discharges from the mouth and nose of infected persons and articles freshly soiled with such discharges.
3. *Mode of transmission.*—Believed to be by direct contact, by droplet infection or by articles freshly soiled with discharges of the nose and throat of infected persons.
4. *Incubation period.*—Short, usually 24 to 72 hours.
5. *Period of communicability.*—Undetermined, apparently during the febrile period or at least for seven days from onset of clinical symptoms.

6. *Methods of control:*
   (A) The infected individual and his environment—
   1. Recognition of the disease—By clinical symptoms only. Uncertain in inter-epidemic periods
   2. Isolation—During acute stage of disease.
   3. Immunization—None; vaccines have not proved of definite value.
   4. Quarantine—None.
   5. Concurrent disinfection—Discharges from the nose and throat of the patient.
   6. Terminal disinfection—Airing and cleaning
   (B) General measures—
   During epidemics efforts should be made to reduce opportunities for direct-contact infection, as in crowded halls, stores, and street cars. Kissing, the use of common towels, glasses, eating utensils, or toilet articles should be avoided The hands should be washed carefully before eating In isolated towns and institutions, infection has been delayed and sometimes avoided by strict exclusion of visitors from already infected communities The closing of schools has not been effective in checking the spread of infection The use of masks by nurses and other attendants has proved of value in preventing infection in hospitals Scrupulous cleanliness of dishes and utensils used in preparing and serving food in public eating places should be required, including the subjection of all such articles to disinfection in hot soapsuds In groups which can be brought under daily professional inspection, the isolation of early and suspicious cases of respiratory tract inflammation, particularly when accompanied with a rise in temperature, may be relied upon to delay the spread of the disease To minimize the severity of the disease and to reduce mortality, patients should go to bed at the beginning of an attack and not return to work without the approval of their physician

Leprosy

1. *Infectious agent.*—Leprosy bacillus, ***Mycobacterium lepræ.***
2. *Source of infection.*—Discharges from lesions.
3. *Mode of transmission.*—By close, intimate, and prolonged contact with infected individuals. Flies and other insects may be mechanical carriers.
4. *Incubation period.*—Prolonged, undetermined.
5. *Period of communicability.*—Infectivity exists throughout the duration of the disease.

   Where good standards of personal hygiene prevail, this disease is but slightly communicable.
6. *Methods of control:*
   (A) The infected individual and his environment—
   1. Recognition of the disease—Clinical symptoms, confirmed by bacteriological examination.
   2. Isolation for life in national leprosarium when this is possible, or at least until treatment has brought about a healing of all lesions of skin and mucous membranes and the patient has been observed with the disease in this arrested form for not less than six months.
   3. Immunization—None.
   4. Quarantine—None.

6. *Methods of control*—Continued.
   (A) The infected individual and his environment—Continued.
      5. Concurrent disinfection—Discharges and articles soiled with discharges.
      6. Terminal disinfection—Thorough cleansing of living premises of the patient.
   (B) General measures—
      1. Lack of information as to the determining factors in the spread and communication of the disease makes any but general advice in matters of personal hygiene of no value
      2. As a temporary expedient lepers may be properly cared for in local hospitals, or if conditions of the patient and his environment warrant, he may be allowed to remain on his own premises under suitable regulations

Malaria

1. *Infectious agent.*—The several species of malarial organisms—*Plasmodium vivax* (tertian); *Plasmodium malariæ* (quartan); *Laverania falciparum* (æstivo-autumnal).
2. *Source of infection* —The blood of an infected individual.
3. *Mode of transmission.*—By bite of the infected Anopheles mosquitoes The mosquito is infected by biting an individual suffering from acute or chronic malaria. The parasite develops in the body of the mosquito for from 10 to 14 days, after which time the sporozoites appear in its salivary glands.
4. *Incubation period.*—Varies with the type of species of infecting organism and the amount of infection; usually 14 days in the tertian variety.
5. *Period of communicability* —As long as the malaria organism exists in the blood.
6. *Methods of control*
   (A) The infected individual and his environment—
      1. Recognition of the disease—Clinical symptoms, always to be confirmed by microscopical examination of the blood Repeated examinations may be necessary.
      2. Isolation—None except protection of the patient from approach of mosquitoes by screening his bed or room or house, until his blood is rendered free from malarial parasites by thorough treatment with quinine.
      3. Immunization—None. The administration of prophylactic doses of quinine should be insisted upon for those constantly exposed to infection and unable to protect themselves against Anopheles mosquitoes.
      4. Quarantine—None
      5. Concurrent disinfection—None. Destruction of Anopheles mosquitoes in the sick room.
      6. Terminal disinfection—None. Destruction of Anopheles mosquitoes in the sick room.
   (B) General measures—
      1. Employment of known measures for destroying larvæ of anophelines and the eradication of breeding places of such mosquitoes.
      2. Blood examination of persons living in infected centers to determine the incidence of infection.
      3. Screening sleeping and living quarters; use of mosquito nets.
      4. Killing mosquitoes in living quarters.

Malta Fever

1 *Infective organism*—*Micrococcus melitensis; Brucella melitensis, Alkaligenes melitensis, Alkaligenes abortus*

2 *Source of infection*—The milk and urine of infected goats, and the urine, blood, and milk of other infected domestic animals, mules, asses, horses, cows, oxen, hogs, sheep, rabbits, dogs, and fowls; the urine of infected persons and of carriers of the organism

3 *Mode of transmission*—By ingestion of milk from infected goats commonly; by direct contact with infected animals and persons and their urinary discharges in ways to permit the contamination of food and hands, occasionally; by inhalation of dust from soil or surfaces contaminated with urinary discharges of infected animals or persons rarely; possibly by inoculation through abrasions of the skin by contaminated dust or soil, and by sexual intercourse with infected persons, and rarely by ingestion of infected cow's milk or by contact with infected blood or organs of domestic animals

4. *Incubation period*—Six to sixteen days

5 *Period of communicability*—From the onset of the disease until the organism is no longer found in the urine, usually 90 days, with a range of 20 to 300 days

6. *Methods of control.*

(A) The infected individual and his environment—

1 Recognition of the disease—The clinical picture and particularly the undulant character of the fever, supplemented by exact determination through the use of agglutination tests and bacteriological examination of the blood and urine for the infecting organism.

2 Isolation of infected individuals during the period of communicability

3. Immunization—Preventive vaccination by suspensions of mixtures of the *Micrococcus melitensis* and *Micrococcus paramelitensis* have given good results. This is advised for exposed susceptibles, especially those handling goats in areas where the disease is known to exist. Autogenous vaccines have been used with but little success in the treatment of the disease.

4 Quarantine—None

5. Concurrent disinfection of all discharges, especially the urine and of articles soiled with such discharges

6 Terminal disinfection—Cleaning.

(B) General measures—

1. Sterlization of goats' milk.

2. Protection of public water supplies

3 Supervision of human carriers and their exclusion from the handling of foods.

4 Destruction of infected animals

5. Search for infection among goats by the serum and the lacto reaction (Zammit).

6. Immunization of goats by vaccines in areas where the disease is prevalent.

7. Exclusion of goats from areas of infection.

8. Sanitary supervision of goat shelters.

Measles

1. *Infectious agent*.—Unknown.
2. *Source of infection*.—Buccal and nasal secretions of an infected individual.
3. *Mode of transmission*.—Directly from person to person, indirectly through articles freshly soiled with the buccal and nasal discharges of an infected individual. The most easily transmitted of all communicable diseases.
4. *Incubation period*.—About 10 days.
5. *Period of communicability*.—During the period of catarrhal symptoms and until the cessation of abnormal mucous membrane secretions—minimum period of nine days; from four days before to five days after the appearance of the rash.
6. *Methods of control*.

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms. Special attention to rise of temperature, Koplik spots and catarrhal symptoms in exposed individuals.
2. Isolation—During period of communicability.
3. Immunization—By the use of the serum or whole blood of convalescent measles patients, or of any healthy adults who have had measles, given within five days after exposure to a known case of measles, the attack in the exposed person may be averted in a high percentage of instances; if not averted, the disease is modified. Given later, but at a time prior to the clinical onset of the disease, convalescent serum usually modifies the severity of the attack and the patient acquires the usual lasting immunity to the disease.
4. Quarantine—Exclusion of exposed susceptible school children and teachers from school until 14 days from last exposure. This applies to exposure in the household. Exclusion of exposed susceptible children from all public gatherings for the same period.
5. Concurrent disinfection—All articles soiled with the secretions of the nose and throat.
6. Terminal disinfection—Thorough cleaning.

(B) General measures—

1. Daily examination of exposed children and of other possibly exposed persons. This examination should include record of the body temperature. A nonimmune exposed individual exhibiting a rise of temperature of 0.5° C. or more should be promptly isolated pending diagnosis.
2. Schools should not be closed or classes discontinued where daily observation of the children by a physician or nurse is provided for.
3. Education as to special danger of exposing young children to those exhibiting acute catarrhal symptoms of any kind.
4. In institutional outbreaks immunization with convalescent serum of all minor inmates who have not had measles is of value in checking the spread of infection and in reducing mortality.

Meningococcus Meningitis

1 *Infective agent*.—Meningococcus; *Neisseria intracellularis.*

2 *Source of infection*.—Discharges from the nose and mouth of infected persons. Clinically recovered cases and healthy persons who have never had the disease but have been in contact with cases of the disease or other carriers, act as carriers and are commonly found especially during epidemics. Such healthy carriers are not uncommonly found independent of epidemic prevalence of the disease.

3. *Mode of transmission*.—By direct contact with infected persons and carriers, and indirectly by contact with articles freshly soiled with the nasal and mouth discharges of such persons.

4 *Incubation period*.—Two to ten days commonly seven. Occasionally for longer periods when a person is a carrier for a time before developing the disease.

5 *Period of communicability*.—During the clinical course of the disease and until the specific organism is no longer present in the nasal and mouth discharges of the patient. The same applies to healthy carriers so far as affects persistence of infectious discharges.

6 *Methods of control*.

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms, confirmed by the microscopic and bacteriological examination of the spinal fluid, and by bacteriological examination of nasal and pharyngeal secretions.
2. Isolation of infected persons until 14 days after onset of the disease.
3. Immunization by the use of vaccines is still in the experimental stage.
4. Quarantine—None.
5. Concurrent disinfection of discharges from the nose and mouth and of articles soiled therewith.
6. Terminal disinfection—Cleaning.

(B) General measures—

1. Search for carriers among families and associates of recognized cases by bacteriological examination of posterior nares of all contacts.
2. Education as to personal cleanliness and necessity of avoiding contact and droplet infection.
3. Prevention of overcrowding such as is common in living quarters, transportation conveyances, working places, and places of public assembly in the civilian population, and in inadequately ventilated closed quarters in barracks, camps, and ships among military units.

(C) Epidemic measures—

1. **Increase the separation of individuals and the ventilation in living and sleeping quarters for such groups of people as are especially exposed to infection because of their occupation or some necessity of living conditions. Bodily fatigue and strain should be minimized for those especially exposed to infection.**
2. Carriers should be quarantined until the nasal and pharyngeal secretions are proved by bacteriological examination to be free from the infecting organism.

Mumps

1. *Infective organism.*—Unknown.
2. *Source of infection.*—Secretions of the mouth and possibly of the nose.
3. *Mode of transmission*—By direct contact with an infected person or with articles freshly soiled with the discharges from the nose or throat of such infected person.
4. *Incubation period.*—From 12 to 26 days. The most common period, 18 days, accepted as usual A period of 21 days is not uncommon
5. *Period of communicability*—Unknown, but assumed to persist until the parotid gland has returned to its normal size.
6. *Methods of control*
   (A) The infected individual and his environment—
      1. Recognition of the disease—Inflammation of Stenson's duct may be of assistance in recognizing the early stage of the disease. The diagnosis is usually made on swelling of the parotid gland.
      2. Isolation—Separation of the patient from nonimmune children and exclusion of the patient from school and public places for the period of presumed infectivity (See 5)
      3. Immunization—None.
      4. Quarantine—None. Exposed susceptible persons should be regularly inspected for the onset, the presence of initial symptoms of the disease, such as fever, or swelling or pain of the parotid or adjacent lymph glands, for three weeks from the date of last exposure
      5. Concurrent disinfection—All articles soiled with the discharges from the nose and throat of the patient.
      6. Terminal disinfection—None.

   (B) General measures—
      None.

Paratyphoid Fever

1. *Infectious agent.*—Paratyphoid bacillus A or B. *Salmonella paratyphi; Salmonella schottmulleri*
2. *Source of infection*—Bowel discharges and urine of infected persons, and foods contaminated with such discharges of infected persons or of healthy carriers. Healthy carriers may be numerous in an outbreak.
3. *Mode of transmission*—Directly by personal contact; indirectly by contact with articles freshly soiled with the discharges of infected persons or through milk, water, or food contaminated by such discharges.
4. *Incubation period.*—Four to ten days; average, seven days.
5. *Period of communicability*—From the appearance of prodromal symptoms, throughout the illness and relapses, during convalescence, and until repeated bacteriological examination of discharges show absence of the infecting organism.
6. *Methods of control:*
   (A) The infected individual and his environment—
      1. Recognition of the disease—Clinical symptoms, confirmed by specific agglutination test, and by bacteriological examination of blood, bowel discharges, or urine.
      2. Isolation—In fly-proof room, preferably under hospital conditions, of such cases as can not command adequate sanitary environment and nursing care in their homes.
      3. Immunization of exposed susceptibles.

6 *Methods of control*—Continued

(A) The infected individual and his environment—Continued.

4 Quarantine—None

5 Concurrent disinfection—Disinfection of all bowel and urinary discharges and articles soiled with them

6 Terminal disinfection—Cleaning.

(B) General measures—

1. Protection and purification of public water supplies.
2. Pasteurization of public milk supplies
3. Supervision of other food supplies and of food handlers [2]
4. Prevention of fly breeding.
5. Sanitary disposal of human excreta
6. Extension of immunization by vaccination as far as practicable.
7. Supervision of paratyphoid carriers and their exclusion from the handling of foods.
8. Systematic examination of fecal specimens, from those who have been in contact with recognized cases, to detect carriers.
9. Exclusion of suspected milk supplies pending discovery of the personal or other cause of contamination of the milk
10. Exclusion of water supply, if contaminated, until adequately treated with hypochlorite or other efficient disinfectant, or unless all water used for toilet, cooking, and drinking purposes is boiled before use

Plague

(Bubonic, Septicemic, Pneumonic)

1. *Infectious agent.*—Plague bacillus; *Pasteurella pestis.*
2. *Source of infection* —Blood of infected persons and animals, and sputum of human cases of plague pneumonia.
3. *Mode of transmission.*—Direct, in the pneumonic form. In other forms the disease is generally transmitted by the bites of fleas (*Xenopsylla cheopis* and *Ceratophyllus fasciatus*), by which the disease is carried from rats to man, also by fleas from other rodents. Accidental, by inoculation, or by the bites of infected animals. Bedbugs may transmit the infection; flies may possibly convey the infection
4. *Incubation period* —Commonly from 3 to 7 days, although occasionally prolonged to 8 or even 14 days.
5. *Period of communicability.*—Until convalescence is well established, period undetermined.
6. *Methods of control:*

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms, confirmed by bacteriological examination of blood, pus from glandular lesions, or sputum. Animal inoculation of material from suspected cases.
2. Isolation—Patient in hospital if practicable; if not, in a screened room which is free from vermin [3]

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[2] The human disease paratyphoid fever should not be confused with cases of food poisoning or infection due to enteritidis bacilli of animal origin

[3] In plague pneumonia, personal prophylaxis, to avoid droplet infection must be carried out by persons who come in contact with the sick Masks of closely woven cloth with mica windows should be worn over the head and to the shoulders. A long gown and rubber gloves drawn over the sleeves of the gown should be provided These articles should not be removed from the sick room until disinfected

6. *Methods of control*—Continued.

(A) The infected individual and his environment—Continued.

3. Immunization—Active immunization of those who may be exposed
4. Quarantine—Contacts for seven days
5. Concurrent disinfection—All discharges and articles freshly soiled therewith
6. Terminal disinfection—Thorough cleaning followed by thorough disinfection

(B) General measures—

1. Extermination of rats and vermin by use of known methods for their destruction, destruction of rats on ships arriving from infected ports; examination of rats, ground squirrels etc., in areas where the infection persists, for evidence of endemic or epidemic prevalence of the disease among them.
2. Supervision of autopsies of all deaths during epidemics
3. Supervision of the disposal of the dead during epidemics, whether by burial, transfer, or holding in vault, whatever the cause of death.
4. Cremation, or burial in quicklime, of those dying of this disease

Pneumonia

Acute Lobar

1. *Infectious agent.*—Various pathogenic bacteria commonly found in the nose, throat, and mouth, such as the pneumococcus, the bacillus of Friedlander, the influenza bacillus, etc.
2. *Source of infection.*—Discharges from the mouth and nose of apparently healthy carriers, as well as of recognized infected individuals, and articles freshly soiled with such discharges.
3. *Mode of transmission.*—By direct contact with an infected person, or with articles freshly soiled with the discharges from the nose or throat of, and possibly from infected dust of rooms occupied by, infected persons
4. *Incubation period.*—Short, usually two to three days.
5. *Period of communicability.*—Unknown; presumably until the mouth and nasal discharges no longer carry the infectious agent in an abundant amount or in a virulent form
6. *Methods of control*·

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms. Specific infecting organisms may be determined by serological and bacteriological tests early in the course of the disease
2. Isolation—Patient during clinical course of the disease.
3. Immunization—None; vaccines are worthy of further careful trial.
4. Quarantine—None.
5. Concurrent disinfection—Discharges from the nose and throat of the patient.
6. Terminal disinfection—Thorough cleaning, airing, and sunning.

(B) General measures—

In institutions and camps, when practicable, people in large numbers should not be congregated closely within doors. The general resistance should be conserved by good feeding, fresh air, temperance in the use of alcoholic beverages, and other hygenic measures.

NOTE.—The early reporting of pneumonia is highly desirable in view of its communicability.

Poliomyelitis

1. *Infectious agent*.—A filterable virus of undetermined morphology.
2. *Source of infection*.—Nose, throat, and bowel discharges of infected persons or articles recently soiled therewith. Healthy carriers are supposed to be common.
3. *Mode of transmission*.—By direct contact with an infected person or with a carrier of the virus, or indirectly by contact with articles freshly soiled with the nose, throat, or bowel discharges of such persons, and probably by drinking milk contaminated by the nose, mouth and bowel discharges of persons in the active stage of the disease.
4. *Incubation period*.—Uncertain because of inexact information as to period of communicability and essentials for exposure, but believed to be from 3 to 10 days, commonly 6 days.
5. *Period of communicability*.—Unknown; apparently not more than 21 days from the onset of disease, but may precede onset of clinical symptoms by several days.
6. *Methods of control*.
   (A) The infected individual and his environment—
      1. Recognition of the disease—Clinical symptoms, assisted by chemical and microscopical examination of the spinal fluid.
      2. Isolation of all recognized cases for three weeks from febrile onset.
      3. Immunization—None.
      4. Quarantine of exposed children of the household and of adults of the household whose vocation brings them into contact with children, or who are food handlers, for 14 days from last exposure to a recognized case.
      5. Concurrent disinfection—Nose, throat, and bowel discharges and articles soiled therewith.
      6. Terminal disinfection—Cleaning.
   (B) General measures during epidemics—
      1. Search for and examination of all sick children should be made.
      2. All children with fever should be isolated pending diagnosis.
      3. Education in such technique of bedside nursing as will prevent the distribution of infectious discharges to others from cases isolated at home.

Rabies

1. *Infectious agent*.—Unknown.
2. *Source of infection*.—Saliva of infected animals, chiefly dogs.
3. *Mode of transmission*.—Inoculation with saliva of infected animals through abrasion of skin or mucous membrane, almost always by bites or scratches.
4. *Incubation period*.—Usually two to six weeks. May be prolonged to 6 months or even longer.
5. *Period of communicability*.—For 15 days in the dog (not known in man) before the onset of clinical symptoms and throughout the clinical course of the disease.
6. *Methods of control*.
   (A) The infected individual and his environment—
      1. Recognition of the disease—Clinical symptoms, confirmed by the presence of Negri bodies in the brain of an infected animal, or by animal inoculations with material from the brain of such infected animal.

6. *Methods of control*—Continued.

(A) The infected individual and his environment—Continued.

2. Isolation—None if patient is under adequate medical supervision, and the immediate attendants are warned of possibility of inoculation by human virus
3. Immunization—Preventive vaccination after exposure to infection by inoculation.
4. Quarantine—None.
5. Concurrent disinfection of saliva of patient and articles soiled therewith.
6. Terminal disinfection—Thorough cleaning.

(B) General measures—

1. Muzzling of dogs when on public streets, or in places to which the public has access.
2. Detention and examination of dogs suspected of having rabies.
3. Immediate antirabic treatment of people bitten by dogs or by other animals suspected or known to have rabies, unless the animal is proved not to be rabid by subsequent observation or by microscopic examination of the brain and cord.
4. Annual immunization of dogs where the disease is prevalent.

Rocky Mountain Spotted or Tick Fever

1. *Infectious agent*—Unknown.
2. *Source of infection.*—Blood of infected animals, and infected ticks (dermacentor species).
3. *Mode of transmission.*—By bites of infected ticks
4. *Incubation period*—Three to ten days, usually seven days.
5. *Period of communicability.*—Has not been definitely determined, probably during the febrile stage of the disease.
6. *Methods of control*·

(A) The infected individual and his environment—

1. Recognition of the disease—By clinical symptoms of the disease in areas where the disease is known to be endemic.
2. Isolation—None, other than care exercised to protect patients from tick bites when in endemic areas.
3. Immunization—The use of the Spencer-Parker vaccine in infected areas has given generally favorable results, but is still in the experimental stage
4. Quarantine—None.
5. Concurrent disinfection—None All ticks on the patient should be destroyed
6. Terminal disinfection—None.

(B) General measures—

1. Personal prophylaxis of persons entering the infected zones during the season of ticks, by wearing tick-proof clothing, and careful daily search of the body for ticks which may have attached themselves.
2. The destruction of ticks by clearing and burning vegetation on the land in infected zones.
3. The destruction of ticks on domestic animals by dipping, and the pasturing of sheep on tick-infested areas where the disease is prevalent, with the object of diminishing the number of ticks.
4. The destruction of small mammalian hosts, as ground squirrels, chipmunks, etc.

Scarlet Fever

1. *Infectious agent.*—*Streptococcus scarlatinæ*
2. *Source of infection.*—Discharges from the nose, throat, ears, abscesses or wound surfaces, and articles freshly soiled therewith. The nose and throat discharges of carriers may also spread the disease.
3. *Mode of transmission.*—Directly by personal contact with an infected person; indirectly by articles freshly soiled with discharges of an infected person, or through contaminated milk, or milk products.
4. *Incubation period.*—Two to seven days, usually three or four days.
5. *Period of communicability.*—Three weeks from the onset of the disease, without regard to the stage or extent of desquamation, and only after all abnormal discharges have ceased and all open sores or wounds have healed.
6. *Methods of control.*—
   (A) The infected individual and his environment—
      1. Recognition of the disease—By clinical symptoms.
      2. **Isolation—In home or hospital, maintained in each case until the end of the period of infectivity.** If medical inspection is not available, isolation for 28 days from onset.
      3. Immunization—Exposed susceptibles as determined by the Dick test may be actively immunized by scarlet fever toxin.
      4. Quarantine—Exclusion of exposed children and teachers from school, and food handlers from their work, until seven days have elapsed since last exposure to a recognized case.
      5. Concurrent disinfection—Of all articles which have been in contact with a patient and all articles soiled with discharges of the patient.
      6. Terminal disinfection—Thorough cleaning.

   (B) General measures—
      1. Daily examination of exposed children and of other possibly exposed persons for a week after last exposure.
      2. Schools should not be closed where daily observation of the children by a physician or nurse can be provided for.
      3. In school and institutional outbreaks immunization of all exposed children with scarlet fever toxin may be advisable.
      4. Education as to special danger of exposing young children to those exhibiting acute catarrhal symptoms of any kind.
      5. Pasteurization of milk supply.

Septic Sore Throat

1. *Infectious agent.*—Streptococcus (hemolytic type).
2. *Source of infection.*—The human naso-pharynx, usually the tonsils, any case of acute streptococcus inflammation of these structures being a potential source of infection, including the period of convalescence of such cases. The udder of a cow infected by the milker is a common source of infection. In such udders the physical signs of mastitis may be absent.[4]
3. *Mode of transmission.*—Direct or indirect human contact; consumption of raw milk contaminated by case or carrier or from an infected udder.
4. *Incubation period.*—One to three days.

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[4] Mastitis in the cow, due to bovine streptococci, is not a cause of septic sore throat in humans unless a secondary infection of the udder by a human type of streptococcus takes place.

5. *Period of communicability*—In man, presumably during the continuance of clinical symptoms, in the cow, during the continuance of discharge of the streptococci in the milk, the condition in the udder tending to a spontaneous subsidence. The carrier stage may follow convalescence and persist for some time.
6. *Methods of control*·
   (A) The infected individual and his environment—
      1 Recognition of the disease—Clinical symptoms Bacteriological examination of the lesions or discharges from the tonsils and naso-pharynx may be useful
      2 Isolation—During the clinical course of the disease and convalescence, and particularly exclusion of the patient from participation in the production or handling of milk or milk products
      3 Immunization—None.
      4 Quarantine—None
      5. Concurrent disinfection—Articles soiled with discharges from the nose and throat of the patient
      6. Terminal disinfection—Cleaning
   (B) General measures—
      1. Exclusion of suspected milk supply from public sale or use, until Pasteurized. The exclusion of the milk of an infected cow or cows in small herds is possible when based on bacteriological examination of the milk of each cow, and preferably the milk from each quarter of the udder at frequent intervals Exclusion of human cases or carriers from handling milk or milk products.
      2. Pasteurization of all milk
      3. Education in the principles of personal hygiene and avoidance of the use of common towel, drinking and eating utensils.

Smallpox

1. *Infectious agent.*—Unknown.
2. *Source of infection*—Lesions of the mucous membranes and skin of infected persons
3. *Mode of transmission*—By direct personal contact; by articles soiled with discharges from lesions. The virus may be present in all body discharges, including feces and urine. It may be carried by flies.
4. *Incubation period.*—Eight to sixteen days. (Cases with incubation period of 21 days are reported.)
5. *Period of communicability*—From first symptoms to disappearance of all scabs and crusts.
6. *Methods of control:*
   (A) The infected individual and his environment—
      1. Recognition of the disease—Clinical symptoms. Tests for immunity may prove useful
      2. Isolation—Hospital isolation in screened wards, free from vermin, until the period of infectivity is over.
      3 Immunization—Vaccination.
      4. Quarantine—Isolation of all contacts until vaccinated with virus of full potency. Daily medical observation of all recently vaccinated contacts until height of reaction is passed, if vaccination was performed within 24 hours of first exposure, otherwise for 16 days from last exposure.

6. *Methods of control*—Continued
   (A) The infected individual and his environment—Continued
      5. **Concurrent disinfection of all discharges.** No article to leave the surroundings of the patient without boiling or equally effective disinfection.
      6. Terminal disinfection—Thorough cleaning and disinfection of premises.
   (B) General measures—
      General vaccination in infancy, revaccination of children on entering school, and of entire population when the disease appears in a severe form.

NOTE.—In order to avoid possible complications or secondary and subsequent infections at the site of vaccination, it is important that the vaccination insertion be as small as practicable, not over one-eighth inch in any direction, and that the site be kept dry and cool. The prick-pressure method is recommended by the United States Public Health Service, or the single scratch method is preferred. Primary vaccination between the ages of two and three months is particularly desirable. The time of vaccination should be adjusted to avoid skin lesions elsewhere on the body, in infants to avoid teething, and in older children to avoid the warmer months. Particular care should be used in primary vaccinations beyond the age of infancy.

Syphilis

1. *Infectious agent.—Treponema pallidum.*
2. *Source of infection.*—Discharges from the lesions of the skin and mucous membranes, and the blood of infected persons, and articles freshly soiled with such discharges or blood in which the *Treponema pallidum* is present.
3. *Mode of transmission.*—By direct personal contact with infected persons, and indirectly by contact with discharges from lesions or with the blood of such persons.
4. *Incubation period.*—About three weeks. (In rare instances reported to have been as long as 70 days.)
5. *Period of communicability.*—As long as the lesions are open upon the skin, or mucous membranes at any stage of the disease.
6. *Methods of control.*
   (A) The infected individual and his environment—
      1. Recognition of the disease—Clinical symptoms, confirmed by microscopical examination of discharges and by serum reactions.
      2. Isolation—Exclusion from sexual contact and from preparation or serving of food during the early and active period of the disease; otherwise none, unless the patient is unwilling to heed, or is incapable of observing, the precautions required by the medical advisor.
      3. Immunization—None.
      4. Quarantine—None.
      5. Concurrent disinfection of discharges and of articles soiled therewith.
      6. Terminal disinfection—None.
   (B) General measures—
      1. Education in matters of sexual hygiene, particularly as to the fact that continence in both sexes and at all ages is compatible with health and normal development.
      2. Provision for accurate and early diagnosis and treatment, in hospitals and dispensaries, of infected persons, with consideration for privacy of record, and provision for following cases until cured.

Methods of control—Continued.

(B) General measures—Continued.

3. Repression of prostitution by use of the police power and control of use of living premises
4. Restriction of sale of alcoholic beverages
5. Restriction of advertising of services or medicines for treatment of sex diseases, etc.
6. Abandonment of the use of common towels, cups, and toilet articles and eating utensils
7. Exclusion of persons in the communicable stage of the disease from participation in the preparing and serving of food.
8. Personal prophylaxis should be advised to those who expose themselves to opportunity to infection.

Tetanus

1. *Infectious agent*—Tetanus bacillus, *Clostridium tetani*.
2. *Source of infection.*—Animal manure, soil, and street dust.
3. *Mode of transmission*—Inoculation, or wound infection
4. *Incubation period.*—Four days to three weeks, or longer if latent bacilli deposited in the tissues are stirred to activity by subsequent chemical or mechanical irritation Commonly 8 to 10 days.
5. *Period of communicability.*—Patient not infectious except in rare instances where wound discharges are infectious.
6. *Methods of control:*

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms; may be confirmed bacteriologically.
2. Isolation—None
3. Immunization—By at least one, and preferably two, injections of antitoxin.
4. Quarantine—None.
5. Concurrent disinfection—None.
6. Terminal disinfection—None.

(B) General measures—

1. Supervision of the practice of obstetrics.
2. Educational propaganda such as "safety-first" campaign, and "safe and sane Fourth of July" campaign.
3. Prophylactic use of tetanus antitoxin where wounds have been acquired in regions where the soil is known to be heavily contaminated, and in all cases where wounds are ragged or penetrating.
4. Removal of all foreign matter as early as possible from all wounds.
5. Supervision of biological products, especially vaccines and sera.

Trachoma

1. *Infectious agent.*[1]—The chief, although not yet known to be the only, infectious agents are the hemoglobinophilic bacilli including the so-called Koch-Weeks bacillus.
2. *Source of infection.*—Secretions and purulent discharges from the conjunctivae and adnexed mucous membranes of the infected persons.

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[1] It has not yet been proven that trachoma is due to one specific organism.

3. *Mode of transmission*.—By direct contact with infected persons and indirectly by contact with articles freshly soiled with the infective discharges of such persons.
4. *Incubation period*.—Undetermined.
5. *Period of communicability*.—During the persistence of lesions of the conjunctivæ and of the adnexed mucous membranes or of discharges from such lesions.
6. *Methods of control*.

   (A) The infected individual and his environment—
   1. Recognition of the disease.—Clinical symptoms. Bacteriological examination of the conjunctival secretions and lesions may be useful.
   2. Isolation—Exclusion of the patient from general school classes.
   3. Immunization—None.
   4. Quarantine—None.
   5. Concurrent disinfection of discharges and articles soiled therewith.
   6. Terminal disinfection—None.

   (B) General measures—
   1. Search for cases by examination of school children, of immigrants, and among the families and associates of recognized cases; in addition, search for acute secreting disease of conjunctivae and adnexed mucous membranes, both among school children and in their families, and treatment of such cases until cured.
   2. Elimination of common towels and toilet articles from public places.
   3. Education in the principles of personal cleanliness and the necessity of avoiding direct or indirect transference of body discharges.
   4. Control of public dispensaries where communicable eye diseases are treated.

Trichinosis

1. *Infectious agent*.—*Trichinella spiralis*.
2. *Source of infection*.—Uncooked or insufficiently cooked meat of infected hogs.
3. *Mode of transmission*.—Consumption of undercooked infected pork products.
4. *Incubation period*.—Variable; usually about one week.
5. *Period of communicability*.—Disease is not transmitted by human host.
6. *Methods of control*.

   (A) The infected individual and his environment—
   1. Recognition of the disease—Clinical symptoms, confirmed by microscopical examination of muscle tissue containing trichinæ.
   2. Isolation—None.
   3. Immunization—None.
   4. Quarantine—None.
   5. Concurrent disinfection—Sanitary disposal of the feces of the patient.
   6. Terminal disinfection—None.

   (B) General measures—
   1. Inspection of pork products for the detection of trichinosis.
   2. Thorough cooking of all pork products at a temperature of 160° F. or over.

Tuberculosis (Pulmonary)

1. *Infectious agent*—Tubercle bacillus (human), *Mycobacterium tuberculosis* (*hominis*)
2. *Source of infection*—The specific organism present in the discharges, or articles freshly soiled with the discharges from any open tuberculous lesions, the most important discharge being sputum. Of less importance are discharges from the intestinal and genito-urinary tracts, or from lesions of the lymphatic glands, bone, and skin
3. *Mode of transmission*—Direct or indirect contact with an infected person by coughing, sneezing, or other droplet infection, kissing, common use of unsterilized food utensils, pipes, toys, drinking cups, etc, and possibly by contaminated flies and dust.
4. *Incubation period*—Variable and dependent upon the type of the disease
5. *Period of communicability*—Exists as long as the specific organism is eliminated by the host Commences when a lesion becomes an open one—i e, discharging tubercle bacilli, and continues until it heals or death occurs.
6. *Methods of control*
   (A) The infected individual and his environment—
   1. Recognition of the disease—By thorough physical examination supplemented by use of the X ray and specific skin reactions when necessary and confirmed by bacteriological examinations of sputum or other materials.
   2. Isolation of such "open" cases as do not observe the precautions necessary to prevent the spread of the disease
   3. Immunization—None.
   4. Quarantine—None
   5. Concurrent disinfection of sputum and articles soiled with it. Particular attention should be paid to prompt disposal or disinfection of sputum itself, of handkerchiefs, cloths, or paper soiled therewith, and of eating utensils used by the patient.
   6. Terminal disinfection—Cleaning and renovation

   (B) General measures—
   1. Education of the public in regard to the dangers of tuberculosis and the methods of control, with especial stress upon the danger of exposure and infection in early childhood.
   2. Provision of dispensaries and visiting-nurse service for discovery of early cases and supervision of home cases
   3. Provision of hospitals for isolation of advanced cases, and sanatoria for the treatment of early cases
   4. Provision of open-air schools and preventoria for pretuberculous children.
   5. Improvement of housing conditions and the nutrition of the poor.
   6. Ventilation and elimination of dust in industrial establishments and places of public assembly.
   7. Improvement of habits of personal hygiene and betterment of general living conditions.
   8. Separation of babies from tuberculous mothers at birth.

Tuberculosis (other than Pulmonary)

1 *Infectious agent*.—Tubercle bacillus (human and bovine), *Mycobacterium tuberculosis* (*hominis et bovis*).

2 *Source of infection*.—Discharges from mouth, nose, bowels, and genito-urinary tract of infected humans, articles freshly soiled with such discharges, milk from tuberculous cattle, rarely the discharging lesion of bones, joints, and lymph nodes

3. *Mode of transmission*.—By direct contact with infected persons, by contaminated food, and possibly by contact with articles freshly soiled with the discharges of infected persons

4 *Incubation period*.—Unknown.

5. *Period of communicability*.—Until lesions are healed.

6. *Methods of control*

(A) The infected individual and his environment—

1 Recognition of the disease—Clinical symptoms confirmed by bacteriological and serological examinations

2 Isolation—None

3. Immunization—None.

4. Quarantine—None

5 Concurrent disinfection—Discharges and articles freshly soiled with them.

6 Terminal disinfection—Cleaning

(B) General measures—

1. Pasteurization of milk and inspection of meats

2 Eradication of tuberculous cows from milch herds used in supplying raw milk.

3 Patients with open lesions should be prohibited from handling foods which are consumed raw

Tularæmia

1. *Infectious agent*.—*Bacterium tularense; Pasteurella tularensis.*

2. *Source of infection*.—Wild rabbits and ground squirrels; also infected laboratory animals—infected flies (*Chrysops discalis*) and ticks (*Dermacentor andersoni*).

3 *Mode of transmission*.—By bites of infected flies and ticks and by inoculation through handling infected animals, as in dressing rabbits for market and cooking, or in performing necropsies on infected laboratory animals. Eye infections have been caused by contamination of the conjunctival sac with portions of the internal organs or with the body fluids of infected flies, ticks, and wild rabbits.

4. *Incubation period*.—From 24 hours to 9 days; average slightly more than 3 days.

5. *Period of communicability*.—There is no authentic record of transfer of the disease from man to man The infection has been found in the blood during the first two weeks; in conjunctival scrapings and in lymph glands up to 17 days; in the spleen taken at autopsy up to 26 days. Flies are infective for 14 days, ticks throughout their lifetime. Refrigerated wild rabbits are infective for three weeks.

6. *Methods of control:*

(A) The infected individual and his environment—

1. Recognition of the disease By clinical symptoms of the disease, by animal inoculation of infected material, and by agglutination reactions
2. Isolation—None.
3. Immunization—None
4. Quarantine—None
5. Concurrent disinfection Disinfection of discharges from the ulcer, lymph glands, or conjunctival sac
6. Terminal disinfection—None

(B) General measures—

1. Avoidance of the bites of, or handling of, flies and ticks when working in the infected zones during the seasonal incidence of the deer fly and tick.
2. The use of rubber gloves by persons engaged in dressing wild rabbits wherever taken, or when performing necropsies on infected laboratory animals. Employment of immune persons for dressing wild rabbits or conducting laboratory experiments Thorough cooking of meat of wild rabbits.

Typhoid Fever

1 *Infectious agent.*—Typhoid bacillus, *Eberthelda typhi.*

2. *Source of infection.*—Bowel discharges and urine of infected individuals. Healthy carriers are common.

3. *Mode of transmission.*—Conveyance of the specific organism by direct or indirect contact with a source of infection. Among indirect means of transmission are contaminated water, milk, and shellfish. Contaminated flies have been common means of transmission in epidemics.

4. *Incubation period.*—From 7 to 23 days, averaging 10 to 14 days.

5. *Period of communicability.*—From the appearance of prodromal symptoms, throughout the illness and relapses during convalescence, and until repeated bacteriological examinations of the discharges show persistent absence of the infecting organism.

6. *Methods of control.*

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms, confirmed by specific agglutination test and bacteriological examination of blood, bowel discharges, or urine.
2. Isolation—In fly-proof room, preferably under hospital conditions, of such cases as can not command adequate sanitary environment and nursing care in their homes Release from isolation should be determined by two successive negative cultures of stool and urine specimens collected not less than twenty-four hours apart.
3. Immunization—Of susceptibles in the family or household of the patient who have been exposed, or may be exposed during the course of the disease.
4. Quarantine—None
5. Concurrent disinfection—Disinfection of all bowel and urinary discharges and articles soiled with them.
6. Terminal disinfection—Cleaning.

6 *Methods of control*—Continued.

(B) General measures—

1 **Protection and purification of public water supplies.**
2 **Pasteurization of public milk supplies.**
3 Supervision of other food supplies, and of food handlers
4 Prevention of fly breeding
5 Sanitary disposal of human excreta.
6 Extension of immunization by vaccination as far as practicable in communities where the disease is prevalent
7 Supervision of typhoid carriers and their exclusion from the handling of foods.
8 Systematic examination of fecal specimens from those who have been in contact with recognized cases, to detect carriers
9 Persons who fail to show a strongly positive Widal reaction and contemplate traveling, should protect themselves by vaccination
10 Exclusion of suspected milk supplies pending discovery of the person or other cause of contamination of the milk
11. Exclusion of water supply, if contaminated, until adequately treated with hypochlorite or other efficient disinfectant, or unless all water used for toilet, cooking, and drinking purposes is boiled before use

Typhus Fever

1. *Infectious agent.*—*Rickettsia prowazeki* is believed to be the causative agent.
2. *Source of infection* —The blood of infected individuals
3. *Mode of transmission.*—Infectious agent transmitted by lice. (*Pediculus corporis, P capitis*)
4. *Incubation period.*—Five to 20 days, usually 12 days.
5. *Period of communicability* —Until 36 hours have elapsed after the temperature reaches normal.
6. *Methods of control.*

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms. Confirmation by agglutination tests ("Weil-Felix" reaction).
2. **Isolation—In a vermin-free room. All attendants should wear vermin-proof clothing.**
3. Immunization—Methods for immunization not generally accepted.
4. Quarantine—Exposed susceptibles for 14 days after last exposure.
5. Concurrent disinfection—None.
6 Terminal disinfection—Destroy all vermin and vermin eggs on body of patient, if not already accomplished Destroy all vermin and eggs on clothing. Rooms to be rendered free from vermin.

(B) General measures—

Delousing of persons, clothing, and premises during epidemics, or when they have come or have been brought into an uninfected place from an infected community.

Whooping Cough

1. *Infectious agent.*—Pertussis bacillus of Bordet and Gengou, *Hemophilus pertussis.*
2 *Source of infection* —Discharges from the laryngeal and bronchial mucous membranes of infected persons (rarely also of infected dogs and cats, which are known to be susceptible)
3. *Mode of transmission* —Contact with an infected person or animal or with articles freshly soiled with the discharges of such person or animal
4. *Incubation period.*—Commonly seven days, almost uniformly within 10 days.
5. *Period of communicability* —Particularly communicable in the early catarrhal stages before the characteristic whoop makes a clinical diagnosis possible The catarrhal stage occupies from 7 to 14 days. After the characteristic whoop has appeared the communicable period continues certainly for three weeks. Even if the spasmodic cough with whoop persists longer than this it is most unlikely that the infecting organism can be isolated from the discharges. The communicable stage must be considered to extend from seven days after exposure to an infected individual to three weeks after the development of the characteristic whoop.
6. *Methods of control.*
   (A) The infected individual and his environment—
      1 Recognition of the disease—Clinical symptoms, supported by a differential leucocyte count, and confirmed where possible by bacteriological examination of bronchial secretions. A positive diagnosis may be made by bacteriological examination of laryngeal discharges as early as one week before the development of the characteristic whoop.
      2. **Isolation—Separation of the patient from susceptible children, and exclusion of the patient from school and public places for the period of presumed infectivity.**
      3. Immunization—Use of prophylactic vaccination recommended by some observers. Not effective in all cases
      4. Quarantine—Limited to the exclusion of nonimmune children from school and public gatherings for 10 days after their last exposure to a recognized case.
      5. Concurrent disinfection—Discharges from the nose and throat of the patient and articles soiled with such discharges
      6. Terminal disinfection—Cleaning of the premises used by the patient.
   (B) General measures—
      Education in habits of personal cleanliness and in the dangers of association or contact with those showing catarrhal symptoms with cough.

Yellow Fever

1. *Infectious agent.*—Unknown.
2 *Source of infection.*—The blood of infected persons
3. *Mode of transmission.*—By the bite of infected *Aedes ægypti* mosquitoes.
4. *Incubation period.*—Three to five days, occasionally six days.
5. *Period of communicability.*—First three days of the fever.

6 *Methods of control*:

(A) The infected individual and his environment—

1. Recognition of the disease—Clinical symptoms
2. Isolation—Isolate from mosquitoes in a special hospital ward or thoroughly screened room. If necessary the room or ward should be freed from mosquitoes by fumigation. Isolation necessary only for the first three days of the fever.
3. Immunization—None
4. Quarantine—Contacts for six days.
5. Concurrent disinfection—None
6. Terminal disinfection—None Upon termination of case the premises should be rendered free from mosquitoes by fumigation

(B) General measures—

Eliminate mosquitoes by rendering breeding impossible.

(C) Epidemic measures—

1. Inspection service for the detection of those ill with the disease.
2. Fumigation of houses in which cases of disease have occurred and of all adjacent houses.
3. Destruction of Aedes ægypti mosquitoes by fumigation; use of larvicides; eradication of breeding places.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Water and Milk Borne Diseases. L. A. Suggs. (Proceedings of the Eighth Texas Water Works Short School, Texas Section, January 18–23, 1926, pp. 15–18. Abstract by L. A. Suggs.)

The water-borne diseases treated by the author in this article include typhoid fever, dysentery, cholera, and hookworm. Typhoid fever is a sanitary problem of the first magnitude. An outbreak of the disease is a reproach to the sanitation of any community. The germ enters the human body by the mouth and passes out by the bowels and urine. Its normal habitat is the alimentary canal of man and it soon dies in any other medium, with the exception of milk in which it grows well. If exposed for 20 minutes to a temperature of 60° C. the germ will be destroyed.

Sanitation has practically eliminated cholera. Hookworm is carried by water but 90 per cent of the infections enter the human body through the skin. All dysenteries are considered under one head. They are carried in the same way as typhoid.

The diseases most commonly conveyed by milk are tuberculosis (all types), typhoid fever, diphtheria, scarlet fever, septic sore throat, Malta fever, summer complaint of children, and diarrhea and dysentery of adults which are referable to milk. Tuberculosis is the most frequent and widespread of all the major infections. Milk is responsible for more sickness and deaths than any other food, possibly as much as all other foods combined. Science points the way out, if society will apply the knowledge. The reason bacteria grow most

luxuriantly in milk is because it is most difficult of all foods to deliver clean, is most readily decomposed, and is the only standard article of diet obtained from animal sources consumed in the raw state Scientific filtration of water and the proper and intelligent inspection of milk have materially reduced those diseases within the last few years.

Viability of Bacillus Typhosus in Oysters During Storage. Fred O Tonney, M D , and John L. White, M. D. Journal of the American Medical Association, vol. 84, May 9, 1925, pp. 1403–1406. (Abstract by R. E. Tarbett.)

This article covers studies made in the laboratories of the Chicago Department of Health to determine the survival of *B typhosus* in stored, shucked and shell oysters. Shell oysters were allowed to remain in 4 per cent sea salt water to which a 24-hour culture of *B. typhosus* had been added for a period of 48 hours; temperature of the water 60° to 70° F. The *B. typhosus* count on the sea salt water was 200,000,000 per cubic centimeter. The oysters were stored at 70° and 45° F. One gallon of shucked oysters was contaminated by adding a 24-hour culture of *B. typhosus* and allowed to stand 48 hours at 70° F. Each oyster, with 10 cubic centimeters of liquor, was then placed in a test tube. Three lots were stored at 98°, 70° and 45° F. The oyster juice subsequent to inoculation showed 74,000,000 *B. typhosus* per cubic centimeter

Endo's medium was used for making counts and colonies checked.

The results for shell oysters showed that at a storage temperature of 70° F. the organism could be found in fairly large numbers up to the eighth day, all oysters being dead by the seventh day, and at the storage temperature of 45° F. up to the sixtieth day, at which time all oysters were dead. *B. typhosus* were found on the shells after 23 days storage.

The results for the shucked oysters showed that at a storage temperature of 98° F. the organisms disappeared between the first and fourth day, the oysters going sour during the first day. At a storage temperature of 70° F. the organism was found in a fairly large number on the seventh day, the oysters souring on the first day. At a storage temperature of 45° F., the organism was found on the twenty-second day, the oysters souring on the fifth day.

The results showed that the longevity of *B typhosus* in the oyster juice of both shell and shucked oysters varied with temperature at which stored, being prolonged with the lower temperature, and that the microorganisms survive for a longer period than do the oysters.

Nonthermophilic, Spore-forming Bacteria Associated with Pasteurizing Equipment. A. H. Robertson, M. W. Yale and R. S. Breed (New York State Sta. Tech. Bul. 119 (1926), pp. 3–11, Pl. 1). From

Experiment Station Record, U S. Dept. of Agriculture, vol. 55, No 3, August, 1926, p 268.

"The discovery of large rod-shaped, spore-forming bacteria in samples of Pasteurized milk which did not appear on agar plates or in the raw milk led to an investigation of the organisms of this type. A total of 140 cultures of such organisms was finally isolated from freshly Pasteurized milk, or from material scraped from the Pasteurizing equipment. Of these cultures 48 were identified as *Bacillus subtilis*, 29 as *B. mesentericus*, 22 as *B vulgatus*, 21 as *B. circulans*, 10 as *B. albolacitis*, 2 as *B. laterosporus*, 1 as *B. panis*, 1 as *B cereus*, and 1 as *B. mycoides* Five cultures were not identified

"It is concluded from the study that the presence of such organisms indicates that the Pasteurizing equipment has not been properly cleaned These types do not appear on agar plates because the vegetative cells and a large majority of the spores have been killed by Pasteurization."

Report on an Investigation of the Pollution of Lake Michigan in the Vicinity of South Chicago and the Calumet and Indiana Harbors, 1924–1925. U. S. Public Health Service, 69 pages. (Abstract by Arthur P Miller)

In the summer of 1924, the trustees of the Sanitary District of Chicago, the commissioner of health of the city of Chicago, the director of health of the State of Illinois and the commissioner of health of the State of Indiana jointly requested the Surgeon General of the Public Health Service to cooperate with them in a study of the sewage pollution of Lake Michigan in the area adjacent to the so-called Calumet district, lying partly in Illinois and partly in Indiana. This request was granted and after certain preliminary surveys work was begun on September 18, 1924, under the immediate direction of Sanitary Engineer H R. Crohurst, continuing until October 31, 1925. The report of the investigation in mimeograph form has recently been released.

Referring to the report, the study was intended to comprise as follows: "(1) Sanitary survey of the drainage area of the Calumet Rivers, bringing together such data as were already available from various sources and supplementing these by additional field surveys as required; (2) the bacteriological study of the waters of Lake Michigan in this region and of the public water supplies taken from it; (3) the collection and analysis of available data relative to the influence of existing pollution of these water supplies upon the public health."

A general discussion of the investigation, together with a statement of previous sanitary investigations, is first offered Included in this first section there are also discussions of the influencing meteorological conditions, the lake elevation and currents and ice covering.

Important data concerning industrial wastes are given in the second section, which covers the survey of existing sources of pollution in the district under study.

The summary of the investigation of industrial plants states the following: "A total of 123 industrial plants were surveyed in the Calumet district. One hundred and nine of these discharge practically no offensive waste liquids, water being used only for condensing and cooling purposes in the power plants or for cooling in manufacturing processes, either in closed systems or in contact with products from which little offensive or taste-producing substances could be derived. The remaining 14 plants which discharge wastes of sanitary significance may be divided into two groups. One group includes plants discharging wastes containing appreciable amounts of organic material that might, under certain conditions, give rise to nuisances near the point of discharge The second group includes plants discharging wastes containing possible taste-producing substances which affect water supplies, especially where chlorine is used in the treatment process."

The survey of sanitary sewerage is summarized in a table which sets forth the approximate distribution of sewer population in the Calumet district.

Physical, chemical, and bacteriological examinations of the waters of Lake Michigan are covered in the third section of this report in considerable detail. Discussions of the methods used for collecting and examining samples, as well as the laboratory technique and method followed in computing plate counts and *B. coli* index, are given. Following this there are discussions of the results of the various examinations made, as well as the different factors having a bearing on conditions existing Several pages are devoted to findings as related to the bacteriological quality of municipal water supplies taken from the lake.

Conclusions drawn are short and concise and will, therefore, be taken directly from the report:

"The pollution of Lake Michigan by sanitary sewage and industrial wastes discharged from the Calumet district in Illinois and Indiana, especially from Indiana, is such as to render the sources of water supply now used by Hammond, Whiting, and East Chicago unfit for that purpose, even with elaborate and efficiently operated purification plants.

"The source of water supply of Gary, Ind., though lying outside of the zone of grossest pollution, is also seriously contaminated but not beyond the capacity of modern purification processes to safeguard it.

"The water supplies drawn by the city of Chicago from the Sixty-eighth Street and Dunne cribs are also affected and at times may be seriously endangered by sewage pollution from the Calumet district.

"The water supplies taken from the lake north of the Chicago River appear to be beyond the zone of pollution from the Calumet

district and are receiving water of such quality that it can be satisfactorily purified by artificial processes, excepting the supplies of Waukegan and Lake Forest Although the pollution of these latter supplies is in no way chargeable to the Calumet district, and its discussion is beyond the scope of this report, the existing pollution in this area of the lake, north of the Sanitary District of Chicago, obviously demands attention and abatement.

"If the use of the lake as a source of water supply for the urban population in the area south of the Chicago River is to be continued, as seems inevitable, it is necessary, in the interest of the public health, that the water supply intakes be protected To remove the intakes beyond the zone of at least occasional gross pollution would require their extension very far into the lake, to a distance which is probably not practicable Moreover, in the absence of remedial measures it is to be anticipated that the existing zone of pollution would be extended with the increase in the population and development of the adjacent land area. Therefore the obvious remedy for the present intolerable situation is abatement of the existing pollution of the lake. The choice of methods to achieve this end involves engineering and economic problems which it is not within the province of this report to discuss There is no question, however, that abatement of the existing pollution is possible notwithstanding the difficulties which it may present; and it is certain that the need is imperative."

The appendices of the report included 29 tables and 27 diagrams, the title of each of which is given in the index and is descriptive of the data contained in the table or shown in the diagram.

Air Conditioning and its Hospital Application. W. J. McConnell. *The Modern Hospital*, vol. 27, No. 2, August, 1926, p. 45. (Abstract by Leonard Greenburg.)

This paper presents a superficial survey of the problem of ventilation of the hospital. The author points out that "acceptable standards for hospital ventilation are lacking," but maintains that the need for mechanically purifying, heating, and otherwise conditioning the air of occupied places is now well recognized. For this reason the author urges that hospitals be equipped with systems for washing, humidifying, and heating the air which is to be supplied to the various rooms. In closing, he attempts to show that the cost of artificial ventilation is less than that of natural window ventilation when one takes into account the lesser bed space which may be obtained when natural ventilation is used.

It would be unfair to the reader of the engineering abstracts to pass over this paper without pointing out that Doctor McConnell cites no evidence for the harmfulness of ordinary city dust, and likewise cites no authority for the amount of dust or odors which may be removed by the ordinary spray washer. The evidence concerning the relation of humidity to disease is still open to further proof; the New York State Commission on Ventilation, for example,

failed to find any relation between respiratory disease and humidity. And, lastly, Doctor McConnell appears to be laboring under some misapprehension that it is necessary to provide a larger floor space per person with the window than with fan ventilation in hospitals.

DEATHS DURING WEEK ENDED DECEMBER 4, 1926

Summary of information received by telegraph from industrial insurance companies for week ended December 4, 1926, and corresponding week of 1925. (From the Weekly Health Index, December 8, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Dec 4, 1926	Corresponding week, 1925
Policies in force	66, 183, 596	62, 275, 841
Number of death claims	12, 548	11, 651
Death claims per 1,000 policies in force, annual rate	9. 9	9 8

Deaths from all causes in certain large cities of the United States during the week ended December 4, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, December 8, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Dec 4, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Dec 4, 1926 [3]
	Total deaths	Death rate [1]		Week ended Dec 4, 1926	Corresponding week, 1925	
Total (65 cities)	6,967	12.6	13 0	757	754	[3] 61
Akron	43			7	6	75
Albany [4]	48	21 0	15.5	1	5	21
Atlanta	77			7	11	
White	39			2	4	
Colored	38	(5)		5	7	
Baltimore [4]	195	12.6	14.5	25	22	76
White	153			20	9	75
Colored	42	(5)		5	13	80
Birmingham	71	17 5	14.4	8	9	
White	37			2	2	
Colored	34	(5)		6	7	
Boston	214	14.2	15 0	26	20	73
Bridgeport	26			0	2	0
Buffalo	136	13.0	15.8	20	20	84
Cambridge	30	12.8	13 5	5	2	89
Camden	33	13.1	17 0	5	8	84
Canton	19	9 0	14.2	1	4	22
Chicago [4]	696	11 9	12.1	61	75	53
Cincinnati	132	16 7	15 4	13	10	81
Cleveland	108	9 1	11 4	16	18	42
Columbus	83	15 2	15 5	3	6	28
Dallas	48	12.3	9 9	5	9	
White	33			4	9	
Colored	15	(5)		1	0	
Dayton	45	13 3	13.0	9	4	148
Denver	82	15.0	16.0	6	0	
Des Moines	24	8.6	13 3	1	0	17
Detroit	250	10 1	12 5	35	44	57
Duluth	20	9 2	7 5	0	2	0
El Paso	27	12.9	12 4	6	4	
Erie	23			3	4	59
Fall River [4]	37	14 7	17 0	4	7	63
Flint	22	8 1	6 8	2	4	34
Fort Worth	27	8 9	8 4	5	2	
White	21			3	2	
Colored	6	(5)		2	0	
Grand Rapids	38	12.7	13 5	2	6	20
Houston	62			11	7	
White	43			8	5	
Colored	19	(5)		3	2	
Indianapolis	96	13.6	16.1	8	8	61
White	81			5		44
Colored	15	(5)		3		172
Jersey City	67	11.0	9.3	5	6	38

(Footnotes at end of table)

Deaths from all causes in certain large cities of the United States during the week ended December 4, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Dec 4 1926: Total deaths	Week ended Dec 4 1926: Death rate [1]	Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year: Week ended Dec 4, 1926	Deaths under 1 year: Corresponding week, 1925	Infant mortality rate, week ended Dec 4, 1926 [2]
Kansas City, Kans	35	15.6	12.6	2	4	39
White	22			2	3	45
Colored	13	(5)		0	1	0
Kansas City, Mo	89	12.4	13.1	8	5	
Los Angeles	270			24	18	67
Louisville	94	15.8	12.4	11	5	94
White	74			8	4	78
Colored	20	(5)		3	1	210
Lowell	37			7	4	135
Lynn	18	9.0	9.1	3	2	79
Memphis	49	14.4	19.7	6	8	
White	24			3	4	
Colored	25	(5)		3	4	
Milwaukee	95	9.6	11.2	15	22	71
Minneapolis	84	10.1	11.5	5	12	28
Nashville [4]	68	14.5	16.5	9	5	
New Bedford	18			4	4	69
New Haven	26	7.4	14.3	1	7	14
New Orleans	143	17.8	18.5	28	14	
White	92			18	11	
Colored	51	(5)		10	3	
New York	1,340	11.8	11.6	132	128	54
Bronx Borough	162	9.4	7.3	13	10	43
Brooklyn Borough	459	10.7	10.6	59	49	60
Manhattan Borough	562	15.6	15.7	42	58	47
Queens Borough	122	8.3	7.2	15	10	68
Richmond Borough	35	12.8	18.1	3	1	53
Newark, N J	90	10.2	12.7	17	14	82
Norfolk	33	9.9	10.5	4	2	81
White	9			0	2	0
Colored	24	(5)		4	0	212
Oakland	59	11.8	12.9	6	7	70
Oklahoma City	31			3	3	
Omaha	55	13.3	10.2	6	7	64
Paterson	33	12.0	11.4	2	6	34
Philadelphia	557	14.5	14.7	60	63	80
Pittsburgh	163	13.3	15.0	25	28	83
Portland, Oreg	69			7	3	70
Providence	58	11.0	9.7	4	6	33
Richmond	42	11.6	15.1	4	7	50
White	22			2	3	39
Colored	20	(5)		2	4	69
Rochester	58	9.4	10.4	5	6	40
St Louis	255	16.0	14.1	30	16	
St Paul	50	10.5	12.1	3	2	29
Salt Lake City [4]	48	18.8	11.5	5	3	76
San Antonio	47	12.0	12.4	8	7	
San Diego	38	18.0	17.7	0	3	0
San Francisco	159	14.6	13.5	9	4	54
Schenectady	14	7.8	14.6	3	2	86
Seattle	74			5	0	48
Somerville	24	12.5	12.6	2	3	57
Spokane	43	20.0	11.5	7	1	162
Springfield, Mass	47	13.3	10.6	4	6	62
Syracuse	40	11.3	12.0	5	6	63
Tacoma	30	14.8	10.5	3	0	71
Toledo	85	15.0	11.1	10	3	96
Trenton	43	16.7	19.8	5	9	85
Utica	36	18.2	12.3	3	3	68
Washington, D C	150	14.8	14.7	21	14	120
White	108			15	4	125
Colored	42	(5)		6	10	169
Waterbury	17			1	2	24
Wilmington, Del	27	11.4	13.7	2	3	44
Worcester	46	12.4	13.4	4	5	48
Yonkers	28	12.6	8.7	8	2	180

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births Cities left blank are not in registration area for births.

[3] Data for 63 cities

[4] Deaths for week ended Friday, December 3, 1926.

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population Atlanta, 31, Baltimore, 15, Birmingham, 39, Dallas, 15; Fort Worth, 14, Houston, 25, Indianapolis, 11; Kansas City, Kans., 14, Louisville, 17, Memphis, 38, Nashville, 30; New Orleans, 26, Norfolk, 38, Richmond, 32, and Washington, D. C , 25

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended December 11, 1926

ALABAMA	Cases
Cerebrospinal meningitis	1
Chicken pox	51
Diphtheria	72
Influenza	44
Malaria	12
Measles	14
Mumps	5
Pellagra	5
Pneumonia	55
Scarlet fever	30
Smallpox	77
Trachoma	2
Tuberculosis	69
Typhoid fever	11
Typhus fever	1
Whooping cough	19

ARIZONA	Cases
Chicken pox	25
Diphtheria	8
Measles	4
Mumps	3
Paratyphoid fever	3
Pneumonia	1
Scarlet fever	20
Tuberculosis	14
Whooping cough	12

ARKANSAS	Cases
Chicken pox	9
Diphtheria	6
Influenza	104
Malaria	23
Measles	16
Mumps	17
Scarlet fever	5
Smallpox	7
Tuberculosis	4
Typhoid fever	6
Whooping cough	16

CALIFORNIA	Cases
Cerebrospinal meningitis—Orange County	1
Chicken pox	460
Diphtheria	154
Influenza	33
Jaundice (epidemic)	2
Leprosy—Los Angeles	1
Lethargic encephalitis—San Francisco	1
Measles	999
Mumps	224
Poliomyelitis	
Amador County	1
Compton	1
Long Beach	1
Los Angeles	1
San Joaquin County	1
Stanislaus County	1
Scarlet fever	231
Smallpox	12
Tuberculosis	139
Typhoid fever	10
Whooping cough	72

COLORADO	Cases
Chicken pox	51
Diphtheria	21
Dysentery	1
German measles	2
Influenza	1
Measles	15
Mumps	21
Pneumonia	7
Scarlet fever	84

COLORADO—continued

	Cases
Smallpox	6
Tuberculosis	28
Typhoid fever	2
Vincent's angina	1
Whooping cough	1

CONNECTICUT

	Cases
Chicken pox	119
Conjunctivitis (infectious)	3
Diphtheria	37
German measles	2
Influenza	5
Measles	39
Mumps	12
Pneumonia (broncho)	20
Pneumonia (lobar)	32
Scarlet fever	52
Septic sore throat	3
Trichinosis	1
Tuberculosis (all forms)	16
Typhoid fever	2
Whooping cough	30

DELAWARE

	Cases
Anthrax	1
Chicken pox	2
Diphtheria	3
Measles	2
Pneumonia	1
Poliomyelitis	1
Scarlet fever	27
Tuberculosis	4
Whooping cough	3

FLORIDA

	Cases
Chicken pox	29
Diphtheria	44
Dysentery	6
Hookworm disease	10
Influenza	20
Malaria	36
Measles	16
Mumps	3
Pneumonia	63
Poliomyelitis	3
Scarlet fever	15
Smallpox	24
Tuberculosis	130
Typhoid fever	18
Whooping cough	5

GEORGIA

	Cases
Cerebrospinal meningitis	1
Chicken pox	32
Conjunctivitis (infectious)	1
Dengue	2
Diphtheria	92
Influenza	90
Malaria	13
Measles	31
Mumps	6
Paratyphoid fever	1
Pellagra	2
Pneumonia	46
Scarlet fever	37
Septic sore throat	9

GEORGIA—continued

	Cases
Smallpox	65
Tuberculosis	19
Typhoid fever	13
Typhus fever	3
Whooping cough	47

IDAHO

	Cases
Chicken pox	15
Diphtheria	2
Measles	33
Mumps	3
Scarlet fever	28
Smallpox	5
Tuberculosis	5
Whooping cough	2

ILLINOIS

	Cases
Cerebrospinal meningitis:	
Champaign County	1
Cook County	2
Chicken pox	602
Diphtheria	112
Influenza	24
Lethargic encephalitis:	
Cook County	1
Vermilion County	1
Measles	742
Mumps	113
Pneumonia	256
Poliomyelitis—Cook County	2
Scarlet fever	285
Smallpox	9
Tuberculosis	163
Typhoid fever	22
Whooping cough	211

INDIANA

	Cases
Chicken pox	163
Diphtheria	99
Influenza	37
Measles	58
Pneumonia	9
Scarlet fever	176
Smallpox	147
Trachoma	5
Tuberculosis	18
Typhoid fever	10
Whooping cough	47

IOWA

	Cases
Chicken pox	86
Diphtheria	42
Measles	17
Mumps	18
Scarlet fever	45
Smallpox	8
Tuberculosis	3
Typhoid fever	2
Whooping cough	14

KANSAS

	Cases
Cerebrospinal meningitis—Hutchinson	1
Chicken pox	154
Diphtheria	41
Influenza	14

KANSAS—continued

	Cases
Measles	58
Mumps	12
Pneumonia	44
Scarlet fever	92
Septic sore throat	8
Smallpox.	
Topeka	12
Scattering	6
Tuberculosis	30
Typhoid fever	3
Whooping cough	72

LOUISIANA

Diphtheria	34
Influenza	13
Malaria	11
Measles	31
Pneumonia	20
Scarlet fever	24
Smallpox	5
Tuberculosis	62
Typhoid fever	10

MAINE

Chicken pox	118
Diphtheria	2
Influenza	1
Measles	71
Mumps	9
Pneumonia	12
Scarlet fever	40
Tuberculosis	7
Typhoid fever	5
Vincent's angina	7
Whooping cough	78

MARYLAND [1]

Cerebrospinal meningitis	1
Chicken pox	143
Diphtheria	58
Dysentery	1
Influenza	27
Lethargic encephalitis	2
Measles	32
Mumps	14
Pneumonia (broncho)	34
Pneumonia (lobar)	43
Pneumonia (undefined)	1
Scarlet fever	53
Tuberculosis	20
Typhoid fever	16
Whooping cough	75

MASSACHUSETTS

Cerebrospinal meningitis	1
Chicken pox	416
Conjunctivitis (suppurative)	2
Diphtheria	104
German measles	8
Influenza	9
Lethargic encephalitis	1
Measles	56
Mumps	166
Ophthalmia neonatorum	29
Pneumonia (lobar)	95

[1] Week ended Friday.

MASSACHUSETTS—continued

	Cases
Poliomyelitis	2
Scarlet fever	324
Septic sore throat	6
Trachoma	2
Tuberculosis (pulmonary)	84
Tuberculosis (other forms)	14
Typhoid fever	6
Whooping cough	148

MICHIGAN

Diphtheria	160
Measles	104
Pneumonia	93
Scarlet fever	308
Smallpox	14
Tuberculosis	215
Typhoid fever	3
Whooping cough	149

MINNESOTA

Chicken pox	293
Diphtheria	55
Influenza	1
Lethargic encephalitis	1
Measles	113
Pneumonia	3
Poliomyelitis	1
Scarlet fever	251
Smallpox	5
Tuberculosis	42
Typhoid fever	3
Whooping cough	14

MISSISSIPPI

Cerebrospinal meningitis	1
Diphtheria	25
Influenza	106
Poliomyelitis	1
Scarlet fever	30
Smallpox	9
Typhoid fever	18

MISSOURI

(Exclusive of Kansas City)

Cerebrospinal meningitis	2
Chicken pox	93
Diphtheria	71
Epidemic sore throat	10
Influenza	20
Measles	1[illegible]8
Mumps	6
Pneumonia	6
Scarlet fever	84
Smallpox	1
Tuberculosis	36
Typhoid fever	10
Whooping cough	39

MONTANA

Cerebrospinal meningitis	2
Chicken pox	32
Diphtheria	2
German measles	2
Measles	140
Mumps	4

MONTANA—continued

	Cases
Scarlet fever	59
Typhoid fever	1
Whooping cough	1

NEBRASKA

Cerebrospinal meningitis	1
Chicken pox	33
Diphtheria	7
German measles	4
Measles	10
Mumps	51
Pneumonia	1
Scarlet fever	31
Septic sore throat	3
Smallpox	10
Tetanus	1
Tuberculosis	1
Typhoid fever	5
Whooping cough	10

NEW JERSEY

Anthrax	1
Chicken pox	299
Diphtheria	123
Dysentery	1
Influenza	18
Measles	32
Pneumonia	135
Poliomyelitis	2
Scarlet fever	143
Typhoid fever	18
Whooping cough	170

NEW MEXICO

Chicken pox	9
Diphtheria	4
Measles	9
Mumps	2
Pneumonia	5
Poliomyelitis	1
Scarlet fever	29
Septic sore throat	1
Tuberculosis	33
Typhoid fever	6

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	1
Chicken pox	526
Diphtheria	101
Dysentery	1
German measles	98
Influenza	12
Measles	817
Mumps	161
Paratyphoid fever	2
Pneumonia	231
Poliomyelitis	4
Scarlet fever	186
Septic sore throat	2
Smallpox	16
Tetanus	2
Typhoid fever	36
Vincent's angina	14
Whooping cough	297

NORTH CAROLINA

	Cases
Chicken pox	147
Diphtheria	102
German measles	2
Measles	16
Scarlet fever	59
Septic sore throat	2
Smallpox	37
Typhoid fever	9
Whooping cough	301

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Chicken pox	18
Diphtheria	33
Influenza	100
Malaria	9
Measles	23
Mumps	16
Pneumonia	87
Poliomyelitis—Tulsa County	1
Scarlet fever	30
Smallpox	
McCurtain County [2]	20
Scattering	11
Typhoid fever	26
Whooping cough	12

OREGON

Chicken pox	24
Diphtheria	20
Influenza	15
Measles	31
Mumps	8
Pneumonia	[3] 10
Poliomyelitis	1
Scarlet fever	86
Smallpox	
Josephine County	11
Klamath County	20
Scattering	16
Tuberculosis	[3] 7
Typhoid fever	5
Whooping cough	5

PENNSYLVANIA

Anthrax—Philadelphia	1
Cerebrospinal meningitis—Duquesne	1
Chicken pox	933
Diphtheria	235
German measles	13
Impetigo contagiosa	28
Lethargic encephalitis—Philadelphia	2
Measles	580
Mumps	118
Ophthalmia neonatorum—Philadelphia	4
Pneumonia	77
Poliomyelitis—Kingston Township [4]	1
Puerperal fever—Philadelphia	1
Scabies	15
Scarlet fever	417
Tuberculosis	102
Typhoid fever	59
Whooping cough	311

[2] Delayed report. [3] Deaths. [4] County not specified.

RHODE ISLAND

	Cases
Chicken pox	16
Diphtheria	12
Measles	1
Mumps	3
Poliomyelitis	1
Scarlet fever	9
Tuberculosis	5
Whooping cough	5

SOUTH CAROLINA

Chicken pox	53
Diphtheria	30
Hookworm disease	25
Influenza	409
Malaria	126
Measles	9
Pellagra	18
Poliomyelitis	1
Scarlet fever	14
Smallpox	1
Tuberculosis	26
Typhoid fever	16
Whooping cough	32

SOUTH DAKOTA

Chicken pox	25
Diphtheria	3
Influenza	2
Measles	36
Pneumonia	9
Scarlet fever	80
Tuberculosis	1
Typhoid fever	4
Whooping cough	19

TENNESSEE

Cerebrospinal meningitis:	
Cocke County	1
Memphis	1
Sevier County	1
Chicken pox	74
Diphtheria	39
Dysentery	2
Influenza	53
Malaria	3
Measles	13
Mumps	1
Ophthalmia neonatorum	2
Pellagra	2
Pneumonia	62
Poliomyelitis—Blount County	1
Rabies	2
Scarlet fever	55
Smallpox	7
Tuberculosis	14
Typhoid fever	67
Whooping cough	67

TEXAS

Cerebrospinal meningitis	1
Chicken pox	10
Diphtheria	82
Influenza	160
Lethargic encephalitis	1
Measles	4
Mumps	5

TEXAS—continued

	Cases
Pellagra	2
Pneumonia	14
Poliomyelitis	1
Scarlet fever	60
Smallpox	12
Trachoma	2
Tuberculosis	13
Typhoid fever	19
Whooping cough	11

UTAH

Chicken pox	54
Diphtheria	12
German measles	10
Measles	464
Mumps	28
Pneumonia	10
Scarlet fever	15
Smallpox	1
Whooping cough	1

VERMONT

Chicken pox	28
Diphtheria	2
Measles	93
Mumps	[illegible]
Scarlet fever	3
Whooping cough	45

WASHINGTON

Cerebrospinal meningitis	2
Chicken pox	151
Diphtheria	59
German measles	14
Influenza	1
Measles	110
Mumps	74
Pneumonia	1
Scabies	1
Scarlet fever	107
Smallpox	66
Tuberculosis	15
Typhoid fever	6
Whooping cough	14

WEST VIRGINIA

Chicken pox	84
Diphtheria	49
German measles	10
Influenza	51
Measles	65
Scarlet fever	65
Smallpox	11
Tuberculosis	16
Typhoid fever	32
Whooping cough	[illegible]

WISCONSIN

Milwaukee:	
Chicken pox	88
Diphtheria	22
German measles	2
Influenza	1
Measles	10
Mumps	51
Pneumonia	16
Scarlet fever	[illegible]
Tuberculosis	7
Whooping cough	59

WISCONSIN—continued

Scattering	Cases
Cerebrospinal meningitis	2
Chicken pox	255
Diphtheria	25
German measles	9
Influenza	50
Measles	513
Mumps	79
Pneumonia	14
Scarlet fever	123
Smallpox	2
Tuberculosis	16
Typhoid fever	2
Whooping cough	123

WYOMING

	Cases
Cerebrospinal meningitis	
Hot Springs County	1
Johnson County	1
Sheridan County	1
Chicken pox	39
Measles	27
Mumps	6
Pneumonia	3
Scarlet fever	21
Tularaemia—Sheridan County	1
Typhoid fever	1
Whooping cough	5

Reports for Week Ended December 4, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	31
Diphtheria	23
Pneumonia	27
Scarlet fever	10
Tuberculosis	26

NORTH DAKOTA

	Cases
Chicken pox	50
Diphtheria	12
German measles	2
Measles	182
Mumps	15
Pneumonia	4
Scarlet fever	66
Smallpox	17
Trachoma	69
Tuberculosis	3

SOUTH CAROLINA

	Cases
Chicken pox	39
Diphtheria	71
Hookworm disease	21
Influenza	513

SOUTH CAROLINA—continued

	Cases
Malaria	175
Measles	13
Pellagra	23
Scarlet fever	25
Smallpox	6
Tuberculosis	22
Typhoid fever	29
Whooping cough	48

SOUTH DAKOTA

	Cases
Chicken pox	35
Diphtheria	9
Measles	72
Mumps	1
Pneumonia	5
Poliomyelitis	1
Scarlet fever	100
Smallpox	20
Tetanus	1
Tuberculosis	2
Typhoid fever	1
Whooping cough	6

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week.

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
September, 1926										
Hawaii Territory	0	27	4		26		0	0	0	25
October, 1926										
Alabama	1	366	176	646	42	26	4	130	8	360
California	12	526	80	10	1,952	2	13	709	63	72
Colorado	0	84	0	1	22	0	2	161	3	29
District of Columbia	0	107	4		3	1	1	48	0	9
Hawaii Territory	2	35	1		102		0		0	7
November, 1926										
Connecticut	2	113	16	1	58		1	230	0	11
District of Columbia	1	149	1		9	1	1	45	0	9

October, 1926

	Cases
Angina	
Colorado	4
Chicken pox	
Alabama	7
California	367
Colorado	59
District of Columbia	10
Hawaii Territory	1
Conjunctivitis (follicular)	
Hawaii	147
Dysentery	
California (amebic)	6
California (bacillary)	4
German measles	
California	41
Hookworm disease	
California	4
Colorado	1
Jaundice (epidemic)	
California	9
Impetigo contagiosa	
Colorado	1
Leprosy:	
California	3
Hawaii Territory	4
Lethargic encephalitis	
Alabama	1
California	8
District of Columbia	1
Mumps	
Alabama	20
California	467
Colorado	6
Paratyphoid fever:	
California	3
Plague:	
Hawaii Territory	1
Rabies (in animals).	
California	40

October, 1926—Continued

	Cases
Septic sore throat	
Colorado	1
Tetanus	
California	4
Trachoma	
California	10
Hawaii Territory	73
Typhus fever:	
Alabama	7
California	1
Whooping cough	
Alabama	120
California	225
Colorado	23
District of Columbia	33

November, 1926

	Cases
Anthrax:	
Connecticut	1
Chicken pox	
Connecticut	426
District of Columbia	88
Conjunctivitis (infectious)	
Connecticut	1
Dysentery (bacillary)	
Connecticut	1
German measles	
Connecticut	7
Lethargic encephalitis	
Connecticut	3
Mumps	
Connecticut	26
Rabies (in animals)	
Connecticut	3
Septic sore throat	
Connecticut	5
Whooping cough.	
Connecticut	175
District of Columbia	18

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended November 27, 1926, 41 States reported 2,389 cases of diphtheria. For the week ended November 28, 1925, the same States reported 1,893 cases of this disease. Ninety-nine cities, situated in all parts of the country and having an aggregate population of more than 30,100,000, reported 1,236 cases of diphtheria for the week ended November 27, 1926. Last year for the corresponding week they reported 880 cases. The estimated expectancy for these cities was 1,391 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-nine States reported 4,348 cases of measles for the week ended November 27, 1926, and 3,215 cases of this disease for the week ended November 28, 1925. Ninety-nine cities reported 773 cases of measles for the week this year, and 1,165 cases last year.

Poliomyelitis.—The health officers of 42 States reported 33 cases

of poliomyelitis for the week ended November 27, 1926 The same States reported 40 cases for the week ended November 28, 1925

Scarlet fever—Scarlet fever was reported for the week as follows: Forty-one States—this year, 3,499 cases, last year, 3,167 cases; 99 cities—this year, 1,245 cases; last year, 1,125 cases; estimated expectancy, 975 cases.

Smallpox—For the week ended November 27, 1926, 40 States reported 413 cases of smallpox Last year for the corresponding week they reported 464 cases Ninety-nine cities reported smallpox for the week as follows 1926, 32 cases; 1925, 89 cases; estimated expectancy, 48 cases One death from smallpox was reported by these cities for the week this year—at Indianapolis, Ind.

Typhoid fever—Four hundred and seventy-seven cases of typhoid fever were reported for the week ended November 27, 1926, by 41 States. For the corresponding week of 1925 the same States reported 566 cases of this disease Ninety-nine cities reported 70 cases of typhoid fever for the week this year and 76 cases for the corresponding week last year. The estimated expectancy for these cities was 87 cases.

Influenza and pneumonia—Deaths from influenza and pneumonia were reported for the week by 93 cities, with a population of about 29,500,000, as follows: 1926, 773 deaths, 1925, 744 deaths.

City reports for week ended November 27, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	21	2	1	0	0	0	0	4
New Hampshire									
Concord	22,546	0	0	0	0	0	2	0	0
Manchester	83,097	0	5	0	0	0	2	0	0
Vermont									
Barre	10,008	0	1	0	0	0	11	0	0
Massachusetts									
Boston	779,620	70	64	30	1	1	8	26	26
Fall River	128,993	6	5	4	3	1	1	5	0
Springfield	142,065	1	5	3	0	0	1	8	2
Worcester	190,757	14	6	1	1	0	1	0	2

City reports for week ended November 27, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND—con.									
Rhode Island:									
Pawtucket	69,760	2	2	0	0	0	0	0	1
Providence	267,918	0	10	10	0	1	0	0	6
Connecticut:									
Bridgeport	([1])	0	11	4	0	1	0	0	4
Hartford	160,197		10						
New Haven	178,927	14	5	3	0	0	0	1	8
MIDDLE ATLANTIC									
New York:									
Buffalo	538,016	14	26	12	1	2	2	3	20
New York	5,873,356	157	207	190	52	11	16	112	144
Rochester	316,786	13	10	2		0	2	1	6
Syracuse	182,003	4	12	3		0	6	9	4
New Jersey:									
Camden	128,642	4	6	24	0	0	0	0	5
Newark	452,513	16	19	12	2	0	0	8	10
Trenton	132,020	3	7	4	0	0	0	0	3
Pennsylvania:									
Philadelphia	1,979,364	153	84	41		1	6	9	63
Pittsburgh	631,563	81	37	22		0	28	0	18
Reading	112,707	15	5	6		0	0	0	4
Scranton	142,266	3	5	0		0	0	2	2
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409,333	11	23	15	0	2	0	15	9
Cleveland	936,485	90	49	104	1	1	1	3	15
Columbus	279,836	20	8	29	0	2	1	0	4
Toledo	287,380	82	19	8	0	1	5	0	5
Indiana:									
Fort Wayne	97,846	7	4	8	0	0	0	0	3
Indianapolis	358,819	58	13	28	0	0	0	0	10
South Bend	80,091	3	3	2	0	0	12	0	1
Terre Haute	71,071	6	3	4	0	0	1	0	6
Illinois:									
Chicago	2,995,239	123	161	55	9	6	152	29	47
Peoria	81,564	14	1	0	0	1	113	3	4
Springfield	63,923	19	3	0	1	1	13	0	2
Michigan:									
Detroit	1,245,824	140	73	104	0	1	2	30	35
Flint	130,316	25	14	4	0	0	1	0	2
Grand Rapids	153,698	9	6	0	0	0	0	0	0
Wisconsin:									
Kenosha	50,891	20	3	0	0	0	6	2	0
Madison	46,385	37	1	0	0	0	0	0	
Milwaukee	509,192	80	33	21	0	0	8	47	10
Racine	67,707		3						
Superior	39,671	7	1	3	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	110,502	4	4	0	0	0	40	1	5
Minneapolis	425,435	186	29	44	0	1	1	0	3
St. Paul	246,001	33	22	7	0	0	8	0	7
Iowa:									
Davenport	52,469	1	3	0	0		5	2	
Sioux City	76,411	15	3	9	0		1	0	
Waterloo	36,771	64	1	0	0		0	1	
Missouri:									
Kansas City	367,481	91	15	3	0	0	1	0	10
St. Joseph	78,342	4	5	0	0	0	1	0	0
St. Louis	821,543	27	60	28	0	0	0	3	
North Dakota:									
Fargo	26,403	11	0	0	0	0	0	0	1
South Dakota:									
Aberdeen	15,036	6	0	0	0		0	0	
Sioux Falls	30,127	5	1	0	0		0	0	

[1] No estimate made.

City reports for week ended November 27, 192 —Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST NORTH CENTRAL—continued									
Nebraska									
Lincoln	60,941	13	2	0	1	0	0	0	0
Omaha	211,768	3	8	3	0	0	2	4	6
Kansas									
Topeka	55,111	11	4	1	0	0	0	0	1
Wichita	88,367	10	8	0	0	0	0	0	2
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	1	4	0	0	0	0	0	5
Maryland									
Baltimore	796,296	85	35	31	9	4	0	6	27
Cumberland	33,741	5	2	0	0	0	0	0	2
Frederick	12,035	1	0	0	0	0	0	0	1
District of Columbia									
Washington	497,906	21	28	19	0	0	2	0	9
Virginia									
Lynchburg	30,395	6	2	3	0	0	0	0	2
Norfolk	(1)	1	6	4	0	0	0	0	2
Richmond	186,403	5	16	22	0	1	4	0	5
Roanoke	58,208	2	5	9	0	0	0	0	1
West Virginia									
Charleston	49,019	0	4	3	0	1	0	0	1
Huntington	63,485	0	3	3	0	--------	0	0	--------
Wheeling	56,208	17	4	4	0	0	0	0	3
North Carolina									
Raleigh	30,371	0	2	4	0	0	1	0	0
Wilmington	37,061	15	0	4	0	0	0	0	5
Winston-Salem	69,031	0	2	10	0	0	0	0	2
South Carolina									
Charleston	73,125	0	3	2	3	0	0	0	6
Columbia	41,225	1	1	2	0	0	0	0	0
Greenville	27,311	2	1	2	0	0	0	0	1
Georgia									
Atlanta	(1)	1	7	27	0	0	2	2	9
Brunswick	16,809	1	0	0	0	0	0	1	0
Savannah	93,134	2	4	0	7	2	0	1	5
Florida:									
Miami	69,754	0	--------	5	0	0	1	0	2
St Petersburg	26,847	--------	0	--------	--------	0	--------	--------	0
Tampa	94,743	2	1	5	0	0	3	0	2
EAST SOUTH CENTRAL									
Kentucky:									
Covington	58,309	1	3	3	0	0	0	0	3
Louisville	305,935	6	14	7	0	0	0	0	4
Tennessee:									
Memphis	174,533	13	13	5	0	0	0	0	1
Nashville	136,220	0	5	12	0	2	0	0	6
Alabama									
Birmingham	205,670	10	7	5	12	6	3	3	6
Mobile	65,955	0	2	1	0	0	0	0	0
Montgomery	46,481	3	1	9	2	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	2	1	0	--------	0	0	--------
Little Rock	74,216	0	4	0	1	--------	2	0	2
Louisiana									
New Orleans	414,493	0	12	15	9	6	20	0	17
Shreveport	57,857	5	1	4	0	0	0	0	4
Oklahoma:									
Oklahoma City	(1)	0	4	2	6	0	0	0	1
Texas:									
Dallas	194,450	9	13	33	0	0	2	2	2
Galveston	48,375	0	1	0	0	0	0	0	1
Houston	164,954	1	5	10	0	0	0	0	8
San Antonio	198,069	1	4	7	0	1	0	0	13

1 No estimate made.

City reports for week ended November 27, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MOUNTAIN									
Montana									
Billings	17,971	4	1	0	0	1	64	0	0
Great Falls	29,883	3	1	0	0	1	0	0	1
Helena	12,037	0	0	0	0	0	0	0	0
Missoula	12,668	3	0	0	0	0	0	0	2
Idaho									
Boise	23,042	4	0	0	0	0	3	10	0
Colorado									
Denver	280,911	5	14	15	--------	2	14	0	7
Pueblo	43,787	5	5	1	0	0	0	0	1
New Mexico									
Albuquerque	21,000	2	1	0	0	0	0	1	1
Arizona									
Phoenix	38,669	0	1	0	0	1	0	0	1
Utah.									
Salt Lake City	130,948	17	4	6	0	0	198	4	5
Nevada.									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	36	7	8	0	--------	6	17	--------
Spokane	108,897	36	4	1	0	--------	47	0	--------
Tacoma	104,455	24	3	12	0	0	1	6	0
Oregon:									
Portland	282,383	10	9	9	0	0	3	4	1
California:									
Los Angeles	(1)	29	40	78	6	0	9	14	23
Sacramento	72,260	1	3	2	0	0	18	10	2
San Francisco	557,530	24	17	12	0	0	45	23	10

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine											
Portland	2	1	0	0	0	0	0	2	0	5	24
New Hampshire											
Concord	1	2	0	0	0	1	0	0	0	0	5
Manchester	3	0	0	0	0	0	0	0	0	0	7
Vermont											
Barre	1	0	0	0	0	1	0	0	0	0	3
Massachusetts											
Boston	38	60	0	0	0	20	1	0	0	38	228
Fall River	1	1	0	0	0	1	1	0	0	0	28
Springfield	7	6	0	0	0	0	0	1	0	5	38
Worcester	11	8	0	0	0	3	1	0	0	0	45
Rhode Island											
Pawtucket	1	0	0	0	0	0	0	0	0	0	10
Providence	6	12	0	0	0	3	1	0	0	2	62
Connecticut											
Bridgeport	7	23	0	0	0	2	0	0	0	0	24
Hartford	6	-----	0	-----	-----	-----	0	-----	-----	-----	-----
New Haven	5	4	0	0	0	4	1	0	0	1	42
MIDDLE ATLANTIC											
New York:											
Buffalo	18	12	0	0	0	10	2	5	1	4	147
New York	118	162	0	0	0	[2] 102	20	9	1	55	1,250
Rochester	9	5	0	0	0	2	1	2	0	11	58
Syracuse	13	3	0	0	0	3	0	0	0	10	40

[1] No estimate made.

[2] Pulmonary tuberculosis only.

City reports for week ended November 27, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
MIDDLE ATLANTIC—continued											
New Jersey											
Camden	2	3	0	0	0	1	0	2	1	2	27
Newark	15	11	0	0	0	19	2	0	0	34	91
Trenton	2	1	0	0	0	4	0	0	0	1	34
Pennsylvania											
Philadelphia	67	50	0	0	0	28	5	9	2	23	443
Pittsburgh	25	28	0	0	0	7	1	0	2	18	135
Reading	2	1	0	0	0	0	0	0	0	2	28
Scranton	2	5	0	0	0	3	0	1	0	1	24
EAST NORTH CENTRAL											
Ohio											
Cincinnati	14	12	1	0	0	9	1	3	0	3	148
Cleveland	29	20	0	0	0	18	2	0	0	18	188
Columbus	11	22	1	1	0	1	1	0	0	1	73
Toledo	13	9	1	0	0	6	1	0	0	23	66
Indiana											
Fort Wayne	2	4	0	0	0	1	0	0	0	0	25
Indianapolis	12	23	3	8	1	4	0	0	0	21	88
South Bend	3	0	0	0	0	0	0	0	0	0	9
Terre Haute	4	9	0	0	0	0	0	0	0	0	37
Illinois											
Chicago	113	73	1	0	0	39	5	2	1	41	634
Peoria	6	2	0	0	0	0	0	0	0	3	18
Springfield	2	2	0	0	0	1	1	0	0	1	19
Michigan											
Detroit	74	76	2	0	0	19	3	0	0	50	280
Flint	9	7	0	1	0	0	0	0	0	4	22
Grand Rapids	8	20	0	1	0	1	1	0	0	4	27
Wisconsin											
Kenosha	2	1	1	0	0	0	0	0	0	1	7
Madison	0	9	0	0	0	0	0	1	0	4	8
Milwaukee	27	12	2	0	0	6	1	0	0	53	89
Racine	4		0				0				
Superior	2	4	0	0		0	0	0	0	0	14
WEST NORTH CENTRAL											
Minnesota											
Duluth	5	7	1	0	0	2	0	0	0	0	22
Minneapolis	40	73	2	0	0	3	0	0	0	0	95
St. Paul	16	15	8	0	0	3	1	0	0	8	57
Iowa											
Davenport	1	4	1	0			0	0		0	
Sioux City	3	8	1	2			0	0		2	
Waterloo	3	1	0	0			0	0		6	
Missouri											
Kansas City	11	12	0	2	0	5	1	0	0	9	84
St. Joseph	3	3	0	0	0	0	0	0	0	0	13
St. Louis	35	58	0	1	0	9	3	3	0	13	233
North Dakota											
Fargo	2	3	0	0	0	0	1	0	0	3	4
South Dakota											
Aberdeen	1	10	0	0			0	0		0	
Sioux Falls	2	0	0	0			0	0		0	
Nebraska											
Lincoln	2	5	0	0	0	0	0	0	0	1	18
Omaha	5	9	3	1	0	1	0	0	0	0	57
Kansas											
Topeka	2	0	0	9	0	1	1	0	0	3	22
Wichita	3	15	0	0	0	0	0	1	0	7	29
SOUTH ATLANTIC											
Delaware											
Wilmington	4	9	0	0	0	2	0	0	0	0	27
Maryland											
Baltimore	20	17	0	0	0	13	4	2	1	37	214
Cumberland	0	0	0	0	0	0	0	0	0	0	7
Frederick	0	0	0	0	0	0	0	0	0	0	5

City reports for week ended November 27, 1926—Continued

Division, State, and city	Scarlet fever: Cases estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
SOUTH ATLANTIC—continued											
District of Col.											
Washington	19	12	0	0	0	4	3	2	0	5	126
Virginia											
Lynchburg	0	2	0	0	0	0	0	0	0	0	12
Norfolk	2	12	0	0	0	3	0	1	0	1	-------
Richmond	8	5	0	0	0	4	1	0	0	0	49
Roanoke	2	5	0	0	0	1	1	0	0	0	17
West Virginia											
Charleston	1	2	0	0	0	1	0	0	0	0	13
Huntington	2	3	0	0	-------	-------	1	0	-------	0	-------
Wheeling	2	0	0	0	0	0	1	1	0	0	17
North Carolina											
Raleigh	2	7	0	0	0	1	0	0	0	12	24
Wilmington	1	0	1	0	0	0	1	0	0	4	12
Winston-Salem	1	4	0	0	0	0	0	0	0	1	15
South Carolina											
Charleston	1	0	0	0	0	2	1	1	0	0	26
Columbia	1	0	0	0	0	0	0	0	0	2	-------
Greenville	1	0	0	0	0	0	0	0	0	0	4
Georgia:											
Atlanta	5	4	0	1	0	2	1	1	0	2	65
Brunswick	0	0	0	0	0	0	0	0	0	0	5
Savannah	1	1	0	1	0	2	1	0	0	0	32
Florida:											
Miami	-------	0	-------	0	0	4	-------	1	0	1	34
St. Petersburg	1	-------	0	-------	0	0	0	-------	0	-------	11
Tampa	0	4	0	0	0	1	0	2	1	1	31
EAST SOUTH CENTRAL											
Kentucky.											
Covington	2	3	0	0	0	1	0	0	0	0	23
Louisville	4	11	1	1	0	8	2	1	1	8	79
Tennessee											
Memphis	5	12	1	0	0	4	1	3	0	15	52
Nashville	3	15	1	0	0	6	1	1	0	3	63
Alabama											
Birmingham	4	3	0	0	0	6	1	1	0	1	83
Mobile	0	2	0	0	0	1	0	0	1	0	14
Montgomery	1	0	0	0	0	0	0	0	0	0	17
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	2	2	0	1	-------	-------	1	0	-------	0	-------
Little Rock	2	1	1	0	0	3	1	0	1	2	-------
Louisiana:											
New Orleans	7	7	0	0	0	17	2	3	3	0	160
Shreveport	1	1	1	0	0	2	1	0	0	0	26
Oklahoma:											
Oklahoma City	3	2	0	1	0	0	0	0	0	0	26
Texas:											
Dallas	4	27	0	0	0	1	1	1	2	4	47
Galveston	1	5	0	0	0	1	0	0	0	0	14
Houston	1	1	0	0	0	2	0	0	0	0	43
San Antonio	1	2	0	0	0	11	0	0	2	0	64
MOUNTAIN											
Montana:											
Billings	1	0	0	0	0	0	0	0	0	0	10
Great Falls	1	4	1	0	0	0	0	0	0	0	13
Helena	0	0	0	0	0	0	0	0	0	0	4
Missoula	0	12	0	0	0	0	0	0	0	0	8
Idaho:											
Boise	1	0	0	0	0	0	0	0	0	0	4
Colorado:											
Denver	10	65	4	0	0	11	0	0	0	0	76
Pueblo	2	0	0	0	0	0	0	0	0	0	9

City reports for week ended November 27, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
MOUNTAIN—contd											
New Mexico											
Albuquerque	1	0	0	0	0	4	0	0	0	0	15
Arizona											
Phoenix	3	2	0	0	0	7	0	0	0	0	23
Utah											
Salt Lake City	3	5	1	0	0	0	0	2	0	0	--------
Nevada											
Reno	1	0	0	0	0	0	0	0	0	0	6
PACIFIC											
Washington											
Seattle	7	8	3	0	--------	--------	1	5	--------	0	--------
Spokane	7	25	3	1	--------	--------	0	1	--------	2	--------
Tacoma	2	5	2	0	0	0	0	0	0	1	--------
Oregon											
Portland	7	19	4	0	0	4	1	0	1	0	69
California											
Los Angeles	20	42	3	1	0	16	2	0	0	5	250
Sacramento	2	1	0	0	0	7	0	1	0	0	21
San Francisco	10	12	0	0	0	11	1	1	0	3	141

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis (infantile paralysis): Cases	Poliomyelitis (infantile paralysis): Deaths
NEW ENGLAND									
Massachusetts									
Boston	0	0	0	0	0	0	1	1	0
Fall River	0	0	0	0	0	0	0	1	1
MIDDLE ATLANTIC									
New York									
New York	3	1	2	0	0	0	3	2	0
New Jersey									
Newark	1	0	1	0	0	0	0	0	0
Pennsylvania									
Philadelphia	1	1	1	1	0	0	0	0	0
EAST NORTH CENTRAL									
Illinois									
Chicago	3	1	1	0	0	0	1	1	1
Michigan									
Detroit	0	0	0	0	0	0	0	1	0
Wisconsin									
Milwaukee	0	0	1	1	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	1	0	0	0	0	0	0	0	0
West Virginia:									
Wheeling	0	1	0	0	0	0	0	0	0
North Carolina									
Winston-Salem	1	1	0	0	0	0	0	0	0
Georgia:									
Atlanta	0	0	0	0	0	1	0	1	0

City reports for week ended November 27, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST SOUTH CENTRAL									
Kentucky.									
Louisville	0	0	0	1	0	0	0	0	0
Tennessee									
Memphis	0	1	0	0	0	0	0	0	0
Alabama									
Birmingham	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Texas									
Dallas	0	0	0	0	0	0	0	1	1
Houston	0	0	0	0	0	1	0	0	0
PACIFIC									
California									
Los Angeles	2	0	0	0	1	0	1	0	0
San Francisco	0	0	0	0	2	2	0	0	0

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended November 27, 1926, compared with those for a like period ended November 28, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, October 24 to November 27, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926	Nov 28, 1925	Nov 27, 1926
101 cities	[2] 176	213	161	224	169	229	176	230	154	[3] 213
New England	132	106	93	118	122	135	139	139	101	[4] 143
Middle Atlantic	148	138	125	142	140	162	143	159	150	154
East North Central	186	241	178	276	185	264	180	292	155	[5] 259
West North Central	278	264	264	252	235	222	221	213	170	191
South Atlantic	213	357	198	319	236	391	271	278	207	284
East South Central	80	384	126	425	63	265	121	368	110	218
West South Central	251	331	189	254	203	379	167	327	172	301
Mountain	[2] 170	155	277	218	240	182	305	146	129	200
Pacific	149	205	141	268	138	232	177	326	157	305

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Helena, Mont., not included.
[3] Hartford, Conn., and Racine, Wis., not included
[4] Hartford, Conn., not included.
[5] Racine, Wis., not included.

Summary of weekly reports from cities, October 24 to November 27, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

MEASLES CASE RATES

	Week ended—									
	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926	Nov 28, 1925	Nov 27, 1926
101 cities	[2] 102	64	149	81	169	105	222	135	205	[3] 133
New England	582	24	822	66	903	31	1,090	47	798	[4] 61
Middle Atlantic	110	13	159	16	170	44	255	28	238	30
East North Central	54	77	70	80	84	100	97	121	118	[5] 131
West North Central	12	85	14	151	10	147	14	197	29	109
South Atlantic	56	9	144	21	217	24	271	54	330	23
East South Central	16	21	16	26	16	10	47	31	32	16
West South Central	4	0	9	9	9	26	9	26	4	103
Mountain	[2] 19	391	37	792	46	1,529	28	1,948	9	2,540
Pacific	14	342	17	315	19	280	30	491	25	340

SCARLET FEVER CASE RATES

	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926	Nov 28, 1925	Nov 27, 1926
101 cities	[2] 155	169	163	189	182	207	178	213	197	[3] 215
New England	194	246	261	265	237	352	201	331	206	[4] 299
Middle Atlantic	106	92	110	94	142	125	143	129	149	137
East North Central	185	157	159	189	180	185	187	202	210	[5] 201
West North Central	292	354	358	415	354	346	401	407	438	411
South Atlantic	180	133	173	199	161	178	115	145	134	158
East South Central	74	332	100	249	168	296	126	228	168	239
West South Central	40	112	97	112	114	142	88	116	132	198
Mountain	[2] 189	364	166	583	176	701	157	637	166	783
Pacific	141	237	155	205	196	280	188	337	237	251

SMALLPOX CASE RATES

	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926	Nov 28, 1925	Nov 27, 1926
101 cities	[2] 10	3	9	3	8	5	16	5	16	[3] 6
New England	0	0	0	0	0	0	0	0	0	[4] 0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	16	1	12	6	13	10	31	3	31	[5] 8
West North Central	25	2	10	2	4	10	16	4	10	30
South Atlantic	6	6	12	0	6	2	19	4	2	4
East South Central	5	5	26	10	32	10	11	0	11	5
West South Central	0	4	0	9	0	30	0	4	9	4
Mountain	[2] 9	9	18	0	18	9	18	0	9	0
Pacific	44	22	47	3	41	5	75	49	94	5

TYPHOID FEVER CASE RATES

	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926	Nov 28, 1925	Nov 27, 1926
101 cities	[2] 25	27	27	24	11	21	17	16	13	[3] 12
New England	17	12	22	17	2	9	31	7	17	[4] 8
Middle Atlantic	21	14	12	12	8	21	20	21	14	13
East North Central	15	17	18	13	9	10	3	5	3	[5] 4
West North Central	18	24	31	26	16	16	14	6	8	8
South Atlantic	25	75	60	45	10	36	29	23	27	19
East South Central	100	140	168	104	42	52	32	36	21	31
West South Central	79	39	48	22	57	34	31	13	31	17
Mountain	[2] 85	46	37	91	9	27	18	27	18	18
Pacific	19	19	8	46	3	30	6	30	14	22

[2] Helena, Mont., not included.
[3] Hartford, Conn., and Racine, Wis., not included.
[4] Hartford, Conn., not included.
[5] Racine, Wis., not included.

Summary of weekly reports from cities, October 24 to November 27, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

INFLUENZA DEATH RATES

	Week ended—									
	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926	Nov 28, 1925	Nov 27, 1926
95 cities	[2] 10	11	13	11	11	14	8	10	9	[3] 10
New England	12	7	5	12	7	2	2	2	12	[4] 10
Middle Atlantic	10	3	14	9	14	10	6	10	8	7
East North Central	7	14	11	6	10	10	6	10	5	[5] 9
West North Central	11	2	6	0	13	13	2	6	2	2
South Atlantic	0	21	17	15	2	17	13	8	10	15
East South Central	26	10	37	21	26	26	42	31	26	42
West South Central	34	24	15	43	29	71	10	33	34	33
Mountain	[2] 9	9	9	18	0	27	18	9	9	36
Pacific	4	7	15	7	4	14	18	4	4	0

PNEUMONIA DEATH RATES

	Oct 31, 1925	Oct 30, 1926	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926	Nov 28, 1925	Nov 27, 1926
95 cities	[2] 117	96	133	101	132	106	146	123	126	[3] 126
New England	108	99	134	99	120	90	139	104	156	[4] 135
Middle Atlantic	136	101	143	113	143	114	160	135	145	138
East North Central	114	86	119	84	131	85	139	106	95	[5] 100
West North Central	97	63	86	84	81	76	101	120	81	74
South Atlantic	129	107	194	120	152	139	146	143	134	165
East South Central	105	135	152	99	163	166	221	171	179	104
West South Central	116	80	150	118	102	113	155	156	150	213
Mountain	[2] 76	182	102	164	176	155	222	109	157	146
Pacific	47	89	91	50	109	99	87	75	98	124

[2] Helena, Mont., not included.
[3] Hartford, Conn., and Racine, Wis., not included.
[4] Hartford, Conn., not included.
[5] Racine, Wis., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,695
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended November 20, 1926.—The following report for the week ended November 20, 1926, was transmitted by the Eastern Bureau of the Secretariat of the Health Section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
British India:						
Calcutta	----	0	----	34	10	12
Rangoon	----	2	----	0	0	0
Negapatam	----	0	----	1	0	0
Ceylon, Colombo	0	0	0	0	0	0
Straits Settlements.						
Singapore	0	0	2	2	1	2
Dutch East Indies						
Cheribon	0	0	0	0	0	0
Siam, Bangkok	0	0	3	0	7	1
French Indo-China						
Turane	0	0	6	1	0	0
Haiphong	0	0	27	22	0	0
Japan Kobe	0	0	0	0	1	0
Mauritius	----	2	0	0	0	0
Port Louis	----	1	0	0	0	0
Union of South Africa						
Durban	0	0	0	0	4	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia.—Aden, Jeddah, Kamaran, Perim

Iraq.—Basrah.

Persia.—Mohammerah, Bender-Abbas, Bushire

British India.—Karachi, Chittagong, Cochin, Vizagapatam, Tuticorin, Bombay, Madras.

Portuguese Indies.—Nova Goa

Federated Malay States.—Port Swettenham.

Straits Settlements.—Penang.

Dutch East Indies.—Samarang, Batavia, Surabaya, Sabang, Makassar, Banjermasin, Palembang, Pontianak, Belawan-Deli, Padang, Samarinda, Tarakan, Menado

French Indo-China.—Saigon and Cholon.

Sarawak.—Kuching.

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao

Portuguese Timor.—Dilly

China.—Amoy, Shanghai (International Settlement)

Hongkong.

Macao

Formosa.—Keelung.

Japan.—Yokohama, Osaka, Nagasaki, Niigata, Tsuruga, Hakodate, Shimonoseki, Moji

Korea.—Chemulpo, Fusan

Manchuria.—Mukden, Changchun, Harbin, Antung, Yingkow.

Kwantung.—Port Arthur, Dairen.

U. S. S. R.—Vladivostok.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island

New Guinea.—Port Moresby

New Britain Mandated Territory.—Rabaul and Kokopo.

New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.

New Caledonia.—Noumea.

Fiji.—Suva.

Hawaii.—Honolulu.

Society Islands.—Papeete.

AFRICA

Egypt.—Port Said, Suez, Alexandria.

Anglo-Egyptian Sudan.—Port Sudan, Suakin

Eritrea.—Massaua

French Somaliland.—Jibuti

British Somaliland.—Berbera.

Italian Somaliland.—Mogadiscio.

Kenya.—Mombasa

Zanzibar.—Zanzibar.

Tanganyika.—Dar-es-Salaam.

Seychelles.—Victoria.

Madagascar.—Majunga, Tamatave.

Portuguese East Africa.—Mozambique, Beira, Lourenco, Marques

Union of South Africa.—East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from:

Dutch East Indies—Balikpapan | *Philippine Islands*—Manila, Iloilo, Jolo, Cebu Zamboanga

ALGERIA

Plague—Oran—Sfax—November 10, 1926—Plague has been reported in Algeria as follows. At Oran, November 12, 1926, one fatal case; near Sfax, November 10, seven small foci.

BRAZIL

Smallpox—Rio de Janeiro—October 17–November 13, 1926—During the four weeks ended November 13, 1926, 279 cases of small-pox with 187 deaths were reported at Rio de Janeiro, Brazil Population, estimated, 1,587,535.

Summary—From January 1 to November 13, 1926, a total of 3,880 new cases of smallpox with 2,092 deaths was reported at Rio de Janeiro, Brazil.

CANADA

Communicable diseases—Week ended November 20, 1926—The Canadian Ministry of Health reports cases of certain communicable diseases in five Provinces of Canada for the week ended November 20, 1926, as follows:

Disease	Nova Scotia	Quebec	Ontario	Manitoba	Saskatchewan	Total
Influenza	33			1		34
Smallpox			34	8	15	57
Typhoid fever		6	9	2	3	20

Communicable diseases—Ontario Province—November, 1926—Comparative.—During the month of November, 1926, communicable diseases were reported in the Province of Ontario, Canada, as follows:

Disease	1926		1925	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis		2		1
Chancroid	1		1	
Chicken pox	1,527		859	
Diphtheria	393		279	19
German measles	15		4	
Gonorrhea	157		143	
Influenza		7		14
Lethargic encephalitis	2			4
Measles	736		530	
Mumps	47		306	
Pneumonia		127		177
Poliomyelitis	8	1	3	1
Scarlet fever	546		514	4
Smallpox	95	1	31	
Syphilis	99		105	
Tuberculosis	84	42	139	75
Typhoid fever	46	5	76	10
Whooping cough	312	2	130	3

Smallpox.—During the month of November, 1926, smallpox was reported in the Province of Ontario at 20 localities, the greatest number of cases being reported at Toronto, viz, 34; at Peterboro, 22 cases were reported.

COLOMBIA

Measures against rats.—Information received from the National Board of Hygiene shows that the campaign against rats is carried out in the Republic of Colombia at the Pacific ports which are in proximity to Guayaquil. The appropriation for the work is divided between the ports of Buenaventura and Tumaco. At Buenaventura a permanent service of rat catching is maintained, the methods employed being traps and premiums offered for dead rats. Measures against rats are carried out at the Atlantic ports, but on a smaller scale and only when deemed urgent by the sanitary officials.

CUBA

Malaria—Santiago de Cuba.—Under date of November 27, 1926, 193 cases of malaria were officially reported in the city of Santiago de Cuba. Unofficial reports place the number at about 5,000 cases present in the city and suburbs.

EGYPT

Plague—Tanta District—November 9, 1926.—A case of plague was reported November 9, 1926, in the district of Tanta.

Summary—January 1–November 4, 1926.—During the period from January 1 to November 4, 1926, 141 cases of plague were reported in Egypt, as compared with 135 cases during the corresponding period of the year 1925.

PARAGUAY

Mortality from tuberculosis—Asuncion—June 27–October 30, 1926.—During the period June 27 to October 30, 1926, 65 deaths from tuberculosis were reported at Asuncion, Paraguay. Population, 65,000.

Prevailing diseases.—During the same period, bronchitis, influenza, and pneumonia were stated to be the prevailing diseases at Asuncion.

TUNISIA

Plague—November, 1926.—Under date of November 27, 1926, six centers of plague were stated to exist in Tunisia, with a total of 57 isolated cases. No case of plague was reported in the city of Tunis or its suburbs. The epidemic was stated to be an epizootic affecting only the wild rats of the farming country of the interior and to have no relation with the Mediterranean ports. No new case of plague has been reported at Zarzia since October 31, 1926.

UNION OF SOUTH AFRICA

Plague—Cape Province—October 17–23, 1926—During the week ended October 23, 1926, 4 cases of plague with 3 deaths were reported in the Cape Province, Union of South Africa, occurring according to locality as follows: *Kimberley District*, on farm in vicinity of Modder River Station, 1 fatal case, European, making a total of 3 European cases and 1 native case, all fatal, occurring on the same farm, from October 10 to 23, 1926; *Williston District*—cases, 3, deaths, 2

Smallpox, Durban, Natal—During the week ended October 23, 1926, 6 additional cases of smallpox were reported in Durban, Natal, occurring in immediate contacts with the first cases, making a total of 16 cases reported since the beginning of the outbreak. The case previously reported at Inanda was stated to have been chicken pox.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended December 17, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Amoy	Oct. 24–30	3		
India				Oct 3–9, 1926 Cases, 1,277, deaths, 680
Philippine Islands.				
Manila	Oct 24–30	1		
Siam				Oct. 17–23, 1926, Case, 1 Apr 1–Oct. 23, 1926 Cases, 7,671, deaths, 5,043.
Bangkok	Oct 17–23	1		District

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria.				
Oran	Nov 13	1	1	
Sfax	do	7		
British East Africa				
Uganda	July, 1926	203	170	
Do	August, 1926	109	97	
China				
Nanking	Oct. 10–23			Prevalent.
Egypt				Nov 3–9, 1926 Cases, 1 Jan 1–Nov 4, 1926, Cases, 141
Tanta district	Nov 3–9	1		
India				Oct 3–9, 1926 Cases, 1,002, deaths, 517
Madras Presidency	Oct 10–16	117	62	
Tunisia	Reported No 27			57 cases
Union of South Africa				
Cape Province				Oct 17–23, 1926. Cases, 4, deaths, 3
Kimberley district	Oct 17–23	1	1	European.
Williston district	do	3	2	Do.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended December 17, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Brazil				
Bahia	Oct 17-23	3		
Pernambuco	Oct. 3-16	45	1	
Rio de Janeiro	Oct 17-Nov 13	279	187	Summary: Jan 1-Nov. 13, 1926, Cases, 3,850; deaths, 2,092
British East Africa				
Tanganyika Territory	Aug 29-Sept 18	7		
Uganda	August, 1926	1		
Canada				
Manitoba	Nov 14-20	8		
Winnipeg	Nov 28-Dec 4	2		
Ontario	Nov 14-20	34		November, 1926 Cases, 95; deaths, 1. Corresponding period, 1925 Cases, 31
Ottawa	Nov 28-Dec 4	1		
Toronto	Nov 21-27	8		
Saskatchewan	Nov 14-20	15		
China				
Chungking	Oct 17-23			Present
Foochow	Oct 24-30			Do
Nanking	Oct 8-30			Prevalent
Swatow	Oct 24-30			Sporadic
Great Britain				
England and Wales	Nov 7-13	218		
Newcastle-on-Tyne	Nov 14-30	1		
Stoke on Trent	Nov 7-13	1		
India				Oct 3-9, 1926 Cases, 425, deaths, 80
Bombay	Oct 17-23	7	5	
Madras	Oct 31-Nov 6	1		
Mexico				
Mexico City	Nov 19-25	1		Including municipalities in Federal district
San Luis Potosi	Nov 14-27		5	
Portugal				
Lisbon	Nov 7-13	1		
Siam				Oct 17-23, 1926 Cases, 3, deaths, 1 Apr 1-Oct 23, 1926 Cases, 599, deaths, 241
Bangkok	Oct 17-23	2	1	
Union of South Africa:				
Natal—				
Durban	Oct 17-23	6		Hindus and natives Total occurrence in outbreak, 16 cases, 4 deaths

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
China				
Antung	Oct 25-31	3		
Great Britain				
Scotland—				
Port Glasgow	Reported Dec 10	8		
Mexico				
City of Mexico	Nov 7-20	12		Including municipalities in Federal district
Poland				
Tarnopol district	Oct 10-16	1	1	
Union of South Africa				
Cape Province—				
Clydesdale	Oct 17-23			Outbreaks.

Reports Received from June 26 to December 10, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926. Cases, 31; deaths, 29
China:				
Amoy	Aug. 8-Oct 23	271		
Antung	Aug. 1-31	500		
Canton	June 1-30	38	14	
Do	July 15-31	54	28	
Do	Aug 25-31	30	8	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 10, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Changsha	Oct 3-16	2		
Foochow	Aug 1[illegible]-Oct 2		1	In foreign population.
Kulangsu	Sept 12-18		2	
Manchuria—				
Changchun	Aug 1-[illegible]	320		
Dairen	[illegible]-30	10	1	
Harbin	Aug [illegible]-[illegible] 12	2[illegible]	83	
Newchwang	Aug 1-[illegible]	1[illegible]		
Nanking	July 27-Oct 2			Present
Shanghai	Reported July 2[illegible]	[illegible]5	[illegible]	
Do	July 2[illegible]-[illegible] 3[illegible]	4[illegible]	42[illegible]	Cases among deaths native and foreign.
Swatow	June [illegible]	70	6[illegible]	
Tientsin	July [illegible]-Aug [illegible]	4	4	Japanese settlements, 10 deaths, Chinese, 30 to 40 deaths daily, estimated
Do	Oct 10-16			Present
Chosen				
North Heian Province	Sept 3-16	70	30	Deaths estimated
Shingishu	Sept 12	19		Including places in vicinity
French settlements in India	Mar 7-June 26	31	30	
Do	June 27-Aug [illegible]	94	83	
India				Apr 27-June 26, 1926 Cases, 15,[illegible]26, deaths 11,531 June 27-Oct 2, 1926 Cases, 27,267, deaths 17,286
Bombay	May 30-June 5	1	1	
Do	July 18-Oct 16	4	4	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-Sept 25	304	272	
Madras	May 16-June 5	2	1	
Do	Aug 1-Sept 25	7	6	
Rangoon	May 9-June 26	67	44	
Do	June 27-Sept 4	31	29	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug 14	31	17	
Japan				To Sept 10, 1926 Cases, 35.
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama.
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Taihoku	Sept 1-10	2		
Wakayama	To Sept 10	2		
Taiwan Island	Sept 21-Oct 10	11		
Philippine Islands.				
Manila	Dec 29, 1925-Oct. 2, 1926	26	6	
Provinces—				
Albay	Apr 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb 21-Mar 6	3	3	
Pampanga	July 25-31	1	1	
Rizal	July 18-24	1		
Romblon	Dec 14-31	42	43	
Do	Jan 2-Mar 27	41	35	
Siam				Apr. 1-Oct 16, 1926 Cases, 7,670 deaths, 5,043
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-Oct 16	97	68	
Straits Settlements				
Singapore	July 4-17	2	1	
On vessel:				
Steamship Macedonia	Aug. 5	7		At Yokohama, Japan. Vessel sailed from Singapore July 18, 1926

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 10, 1926—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21–30	1		Under date of July 16, 2 cases reported
Do	July 1–20	1		
Do	Sept 23	1		
Bona	Aug 14	1		
Oran	Sept 21–Oct 10	9	4	
Philippeville	Sept 7	1		
Azores				
Fayal Island—				
Horta	Aug 2–29	2	2	
St Michaels Island	May 9–June 26	4	1	
Do	June 27–July 10	3	1	
Brazil				
Paranagua	Oct 8			Present
British East Africa				
Kenya—				
Kisumu	May 16–22	1	1	
Do	Aug 17–Sept 11	3	2	
Uganda	Mar 1–June 30	732	574	
Canary Islands				
Las Palmas	Nov 2	3		Stated to be in locality removed from port
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29–June 5	1	1	
Chile				
Iquique	June 20–26		1	
China				
Amoy	Apr 18–June 26	40	30	
Do	June 27–Aug 7	28		
Foochow	June 6–July 31			Several cases Not epidemic.
Nanking	May 9–Sept 18			Prevalent
Swatow	July 25–31	14		
Ecuador				January–June, 1926 Cases, 385, deaths, 154
Chimborazo	January–June	9	2	Rats taken, 766
Guayaquil	May 16–June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1–Oct 31	19	3	Rats taken, 82,774, found infected, 115
Leon	January–June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1,542
Egypt				Jan. 1–Oct 28, 1926 Cases, 140.
City—				
Alexandria	July 27–Aug. 12	4	1	
Suez	May 21–July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23–Aug 15	4	1	
Beni-Suef	May 23–June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
Sidi Barrani	Sept 30–Oct 21	23	3	In western desert.
Tanta District	Oct 22–28	1		
France				
Marseille	July 8	1	1	Reported July 24.
Paris	Oct 18	1		
St Denis	Reported Aug 2	1		Vicinity of Paris
St Ouen	Aug 14	2		Suburb of Paris.
Great Britain				
Liverpool	Aug 29–Sept 4	2	1	
Greece				
Athens	Apr 1–May 31	16	4	Including Piræus.
Do	Aug 1–Sept 30	20	5	Do.
Patras	May 27–June 12	4	1	
Do	July 25–Oct 29	9	5	
Zante	May 17	1		
Hawaii Territory.				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill.
Honokaa	Oct 6	1	1	
Paauhau	July 18–24			Plague, infected rat trapped.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 10, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
India				Apr 25-June 16, 1926. Cases, 53,001, deaths, 41,576 June 27-Oct 2, 1926 Cases, 9,026, deaths, 5,143
Bombay	May 2-June 26	16	15	
Do	July 18-Oct 9	13	12	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	162	93	
Do	July 4-Oct 9	945	415	
Rangoon	May 9-June 26	20	15	
Do	June 27-Oct 16	87	75	
Indo-China				
Saigon	May 23-June 26	8	3	
Do	July 18-Aug 7	2	1	
Iraq				
Baghdad	Apr 18-June 12	161	108	
Do	July 18-Sept 11	4	4	
Japan				
Yokohama	July 2-Aug 10	9	8	
Java				
Batavia	Apr 24-June 19	65	65	
Do	June 26-Oct 16	89	87	
Cheribon	Apr 11-24	3	3	
Do	Sept 12-18	1	1	
East Java and Madura	June 13-19	1	1	
Do	July 25-Oct 16	1	2	
Surabaya	Aug 22-Sept 25	18	2	
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic.
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Do	Aug 16-Sept. 15	7	7	
Maevatanana	do	2	2	
Majunga Province	June 16-30	10	6	
Do	Aug 16-Sept 15	57	48	
Mananjary Province	do	1	1	
Moramanga Province	Apr 1-15	2	2	Do
Do	Sept 1-15	8	8	
Tamatave Province	Aug 16-Sept 15	17	12	
Tananarive Province				Apr 1-June 30, 1926 Cases, 130, deaths, 120 July 1-Sept. 15, 1926 Cases, 155, deaths, 148
Towns—				
Majunga	Aug 1-15	14	10	
Tamatave (Port)	May 16-31	1	1	
Do	July 1-Aug 15	6	5	
Tananarive	Apr 1-June 30	7	7	
Do	July 1-Sept. 15	28	28	
Mauritius.				
Port Louis	July 31	1	1	
Nigeria				Feb 1-June 30, 1926 Cases, 191; deaths, 163 July 1-31, 1926 Cases, 121, deaths, 112
Peru				May-June, 1926: Cases, 57, deaths, 16 July 1-Sept 30, 1926 Cases, 89, deaths, 52.
Departments—				
Ancash	May 1-31			Present
Do	July 1-Sept. 30	2		
Cajamarca	May 1-June 30	10	4	
Do	Aug 1-Sept 30	1		
Ica	May 1-31	1		
Do	July 1-31	1		
Junin	Sept 1-30	21	20	
Lambayeque	do	1		
Libertad	May 1-31	4		
Do	Sept. 1-30	3	1	
Lima	May 1-June 30	29	12	
Do	July 1-Sept 30	60	31	
Piura	June 1-30	13		
Russia				Jan. 1-Mar. 31, 1926 Cases, 37
Senegal				Nov. 1-30, 1925 Cases, 3; deaths, 2 Mar 1-June 30, 1926 Cases, 342, deaths, 213.
Siam				Apr. 1-Oct. 16, 1926 Cases, 15, deaths, 10.
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements:				
Singapore	July 11-24	1	1	
Do	May 7-8		1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 10, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Syria				
Beirut	July 1-Aug 10	2		
Do	Oct 15			Present
Tunisia	May 11-June 30	174		
Do	July 1-Aug 20	13		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Turkey				
Constantinople	Aug 1-Sept 25	7	4	
Union of South Africa				
Cape Province	May 16-22	5	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug 21	3	3	
Hanover District	Oct 10-16	1	1	Native On farm
Kimberley District	do	1	1	European On farm.
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Orange Free State—				
Hoopstad District	Aug 15-21	1		
Protestpan	May 9-22	3	3	
On vessel				
Steamship Zaria	September, 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa, 29 plague-infected rats found on board

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				July 21-Sept 20, 1926 Cases, 230.
Algiers	May 21-June 30	14		
Do	July 1-Aug 31	3		
Arabia				
Aden	Oct 3-9	1		Imported
Belgium				Sept 1-30, 1926 Cases, 2.
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-Aug 31	16	8	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Oct. 10	73	41	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-Oct 30	38	27	
Pernambuco	July 11-Oct. 2	191	25	
Porto Alegre	Aug. 10-31	2		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 25	2,534	1,338	
Do	Oct 3-16	196	113	Jan 1-Oct 16, 1926 Cases, 3,601; deaths, 1,896
Sao Paulo	June 27-Aug 22		5	
Santos	Mar 1-7		1	
British East Africa.				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	252	46	
Uganda	Mar 1-May 31	3		
British South Africa.				
Northern Rhodesia	May 18-24	17	6	Natives.
Do	June 8-14	5		
Do	Sept. 11-17	1		
Canada				May 30-June 26, 1926 Cases, 70 June 27-Nov 13, 1926 Cases, 414
Alberta				May 30-June 12, 1926 Cases, 3. June 27-Nov. 13, 1926 Cases, 82.
Calgary	Sept 5-Nov 22	47		
British Columbia—				
Vancouver	Aug 16-Sept 12	3		
Manitoba				May 30-June 26, 1926 Cases, 15. June 27-Nov. 13, 1926 Cases, 78
Winnipeg	June 6-12	5		
Do	July 4-Nov 6	13		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 10, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Canada—Continued				
New Brunswick				Oct 31-Nov 6, 1926 1 case
Northumberland County	Oct 11-23	1		
Ontario				May 30-June 26, 1926 Cases, 36 June 27-Nov 13 Cases, 144
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-Nov 6	3		
Kitchener	Apr 25-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Packenham	do	10		
Peterboro	Sept 1-30	10		
Toronto	July 18-Nov 20	38		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16 June 27-Nov 13 Cases, 109
Regina	July 4-Sept 25	3		
Ceylon				Mar 14-May 29, 1926 Cases, 44, deaths, 3 Sept 12-18, 1926, Cases, 2
Colombo	Sept 19-Oct 16	7		
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Changsha	Aug 8-14	1		
Chungking	May 2-Oct 16			Present
Foochow	May 2-Oct 2			Do.
Fushun	Sept. 12-18	1		
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	
Manchuria	July 4-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-Sept 11	2		Do
Dairen	Apr. 26-June 20	69	16	
Do	June 28-Aug 8	5	3	
Fushun	May 16-June 5	4		Do
Harbin	May 14-June 30	21		Do.
Do	July 1-28	12		
Kai-yuan	May 16-June 30	10		Do
Kungchuling	June 13-19	1		Do
Liaoyang	May 16-June 30	4		Do
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do.
Do	Aug 8-Oct 3	8		Do.
Ssupingkai	May 16-June 30	2		Do.
Do	Aug 1-7	1		Do
Teshihchiao	May 16-June 30	2		Do.
Tieh-ling	Sept 27-Oct 3	1		
Wa-feng-tien	do	3		Do
Do	Aug. 1-7	1		Do
Nanking	May 8-Sept 18			Present
Shanghai	May 2-June 26	10	25	Cases, foreign: Deaths, population of international concession, foreign and native
Do	June 27-July 24	3	3	
Do	Oct 3-9	1		
Swatow	May 9-Oct. 23			Sporadic
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-June 30, 1926 Cases, 667, deaths, 146. July 1-31, 1926. Cases, 82; deaths, 27
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt:				
Alexandria	May 15-July 1	18	8	
Do	July 23-Oct 21	14	7	
Cairo	Jan. 29-May 13	39	8	
Estonia				May 1-June 30, 1926 Cases, 3.
France				Mar. 1-June 30, 1926 Cases, 141. July 1-Aug 31. Cases, 24
Paris	Sept. 1-Oct 31	65	18	
St. Etienne	Apr 18-June 15	7	3	
Do	Sept 16-30	2	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 10, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
French settlements in India	Mar 7–June 26	282	282	
Do	June 27–Aug 28	68	68	
Germany:				
Coblenz	Oct 24–30	1		
Gold Coast	Mar 1–June 30	671		
Do	July 1–31	20	1	
Great Britain				
England and Wales				May 23–June 26, 1926 Cases, 933; June 27–Nov 6, 1926 Cases, 2,197
Birmingham	Sept 26–Oct 2	1		
Bradford	May 23–29	1		
Do	Aug 29–Sept 4	1		
Hull	Oct 17–23	1		
London	Sept 26–Oct 23	4		
Newcastle-on-Tyne	June 6–12	1		
Do	July 11–Nov. 13	6		At Gateshead, several cases reported.
Nottingham	May 2–June 5	7		
Do	July 18–24	1		
Sheffield	June 13–19	1		
Do	July 4–Nov 13	32		
South Shields	Oct 3–9	1		
Greece				
Athens	July 1–31	71	6	Including Piræus.
Salonki	June 1–14		3	
Guatemala				
Guatemala City	June 1–30		2	
India				Apr 25–June 26, 1926. Cases, 54,851, deaths, 14,771 June 27–Oct 2, 1926 Cases 27,415; deaths, 8,365
Bombay	May 2–June 26	220	134	
Do	June 27–Oct 16	122	67	
Calcutta	Apr 4–May 20	171	152	
Do	June 13–26	24	18	
Do	June 27–Oct 2	45	42	
Karachi	May 6–June 26	44	18	
Do	June 27–Oct 30	15	7	
Madras	May 16–June 26	7	4	
Do	June 27–Oct 30	79	21	
Rangoon	May 9–June 26	10	5	
Do	July 4–Sept 11	21	4	
Indo-China				
Saigon	May 9–June 26	2		
Iraq				
Baghdad	do	8	3	
Do	July 4–Sept 11	3	1	
Basra	Apr 18–June 22	34	25	
Do	Aug 15–21	1		
Italy				Mar. 28–June 26, 1926. Cases, 34. June 27–Aug. 7, 1926. Cases, 12.
Catania	Aug. 9–15	2		
Rome	June 14–20	4		Entire consular district, including island of Sardinia.
Jamaica				Apr 25–June 26, 1926. Cases, 201. (Reported as alastrim.)
Do				June 27–Oct. 30, 1926: Cases, 327. (Reported as alastrim.)
Japan				Apr. 11–June 26, 1926: Cases, 658. June 27–Aug. 28, 1926. Cases, 70.
Kobe	May 30–June 5	1		
Nagoya	May 16–June 22		1	
Do	July 4–10	1		
Taiwan Island	May 11–20	24		
Do	June 1–20	23		
Do	July 11–Aug 10	2		
Tokyo	June 26–July 17	3		
Yokohama	May 2–8	2		
Java				
Batavia	May 15–June 25	2		Province.
Do	July 24–Oct 16	17		Do
East Java and Madura	Apr 11–July 3	100	6	
Do	July 4–Oct 2	61	3	
Malang	Apr 4–10	6	1	Interior
Surabaya	May 16–22	14	1	
Do	July 18–Sept 25	143	8	
Latvia				Apr 1–June 30, 1926: Cases, 5.
Mexico				Feb 1–June 30, 1926 Deaths, 1,525
Aguascalientes	June 13–26		5	
Guadalajara	June 8–14		2	
Do	June 29–Sept 27		8	
Mexico City	May 16–June 5	3		Including municipalities in Federal District
Do	July 25–Sept 25	6		Do

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 10, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Mexico—Continued				
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present, 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-Nov 13		23	
Torreon	May 1-June 30		17	
Do	July 1-Nov 13		16	
Netherlands				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-June 30, 1926. Cases, 521, deaths, 49
Persia				
Teheran	Apr 21-Aug 23		14	
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May 1, 1926 Cases, 12, deaths, 1 June 27-Sept 11, 1926 Cases, 416, deaths, 1
Portugal				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Nov 6	35	7	
Oporto	May 23-June 5	4		
Do	July 11-Nov 6	3	1	
Russia				Jan 1-Apr 30, 1926 Cases, 2,529
Siam				Apr 1-Oct 2, 1926 Cases, 590, deaths, 236
Bangkok	May 2-June 12	23	20	
Do	July 4-Oct 2	77	60	
Spain				Jan. 1-June 30, 1926 Deaths, 99
Valencia	Aug 22-Oct 23	3		
Straits Settlements				
Singapore	Apr. 25-May 1	1		
Do	July 11-17	1		
Sumatra				
Medan	Aug 22-28			1 case varioloid
Switzerland				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tripolitania	Apr 1-June 30	12		
Tunisia				Apr 1-June 30, 1926 Cases, 17
Tunis	Aug 11-30	2		July 1-Sept 30, 1926 Cases, 38.
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks.
Do	Aug 15-21			Do
Idutya district	May 23-29			Do.
Natal	May 30-June 5			Do.
Durban	Oct 10-16	12		
Orange Free State	June 20-Aug 28			Do.
Transvaal				June 6-12, 1926. Outbreaks in Pietersburg and Rustenburg districts.
Do	Aug 29-Sept 4	1		Native
Johannesburg	May 9-June 12	5		
Do	July 11-Sept 25	4		
Pretoria	Sept 19-25	1		
Yugoslavia				Apr. 15-30, 1926 Cases, 2, deaths, 1
Zagreb	Aug. 9-15	2		
On vessels:				
S. S. Karapara				At Zanzibar, June 7, 1926 1 case of smallpox landed. At Durban, Union of South Africa, June 16, 1926 1 suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada. Patient from Glasgow, removed at quarantine on outward voyage

TYPHUS FEVER

Algeria				July 21-Sept. 20, 1926: Cases, 34, deaths, 1.
Algiers	May 21-June 30	7	1	
Do	July 21-Aug. 31	3		
Argentina				
Rosario	Feb. 1-28	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 10, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Bolivia				
La Paz	June 1-30		1	
Do	Aug. 1-31	9	1	
Bulgaria				Mar 1-June 30, 1926 Cases, 87; deaths, 14
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Do	Oct 1-31			Stated to be present in gaol
Iquique	Aug 8-Oct 16	1	2	
Valparaiso	Apr 29-May 5	1	1	
Do	Aug 14-Nov 6	11		
China				
Antung	June 14-27	7	1	
Do	June 28-Oct 24	42	1	
Canton	May 1-31	1		
Chungking	Aug 29-Sept 4			Present
Ichang			1	Reported May 1, 1926 Occurring among troops
Manchuria—				
Harbin	Oct 14-20	1		
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1-June 30, 1926 Cases 1,005, deaths, 112 July 1-31, 1926 Cases, 37; deaths, 6
Chemulpo	May 1-June 30	38		
Do	July 1-31	7	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Do	July 1-Aug. 31	8		
Czechoslovakia				Jan 1-June 30, 1926 Cases, 156, deaths, 6.
Egypt				
Alexandria	July 16-Aug 19	3		
Do	Oct 1-7	1	1	
Cairo	Jan 29-May 13	89	27	
Do	July 23-Aug 5	1		
Port Said	June 4-24	4	1	
Do	July 9-Oct 7	5	1	
France	Aug. 1-31	5		
Great Britain				
Scotland—				
Glasgow	July 30-Aug 21	9	1	
Greece				
Athens	Sept 1-30		17	Including Piræus.
Hungary	May 1-June 30	3		
Iraq.				
Baghdad	Oct 10-16	1		
Ireland (Irish Free State)				
Cork County	June 5	1		Corrected report.
Do	Oct. 17-23	1		
Kerry County—				
Dingle	June 27-July 3	1		
Italy				Mar. 28-May 8, 1926 Cases, 3
Palermo	Sept 12-18	1		
Japan				Mar. 28-May 29, 1926 Cases, 37.
Latvia				May 1-June 30, 1926 Cases, 19. Aug 1-31, 1926 Cases, 2
Lithuania				Mar 1-June 30, 1926. Cases, 199, deaths, 22. July 1-Aug. 31, 1926 Cases, 23
Mexico				Feb. 1-June 30, 1926. Deaths, 189.
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal District.
Do	June 13-19	9		Do.
Do	July 25-31	3		Do
Do	Aug 15-Nov 6	77		Do
San Luis Potosi	June 13-26			Present, city and country.
Morocco				Mar 1-June 30, 1926 Cases, 426 July 1-Aug 31, 1926. Cases, 20.
Norway:				
Stavanger	Sept 6-12	1		
Palestine				Mar 1-June 30, 1926. Cases, 14; deaths, 1. Aug 1-Oct. 25, 1926. Cases, 22
Birtuvia	Oct 31-Nov. 6	1		
Gaza	July 6-12	1		
Haifa	July 13-Aug. 30	5		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 10, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Palestine—Continue				
Halalal	Aug 17-23	1		
Jaffa district	June 15-28	5		
Do	Sept 28-Nov 2	3		
Jerusalem	Sept 14-27	2		
Majdal district	July 13-Aug 2	2		
Nazareth district	July 13-Nov 2	6		
Petah Tokvah	Oct 5-11	3		
Tiberias	Aug 3-9	1		
Yavneil	Aug 17-23	1		
Persia				
Teheran	May 23-June 22		1	
Do	July 24-Aug 23		3	
Peru				
Arequipa	Jan 1-31		2	
Lima	Aug 1-31	1		
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85 June 27-Sept 18, 1926 Cases, 294, deaths, 22
Rumania				Mar 1-June 30, 1926. Cases, 899; deaths, 83 July 1-31, 1926. Cases, 65, deaths, 9
Russia				Jan 1-Apr 30, 1926 Cases, 18,647
Spain	Jan 1-June 30		13	
Tunisia				Apr 1-June 30, 1926 Cases, 110 July 1-Sept 20, 1926 Cases, 101
Tunis	June 11-30	3		
Turkey:				
Constantinople	June 16-22	1		
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths, 19
Do				July 1-31, 1926 Cases, 90, deaths, 17
Cape Province				Apr 1-June 30, 1926 Cases, 202, deaths, 24, native July 1-31, 1926 Cases, 58, deaths, 15
Glengray district	June 27-July 3			Outbreaks
Grahamstown	do	1		
Natal				Apr 1-June 30, 1926 Cases, 28.
Durban	July 25-Sept 18	11	1	July 1-31, 1926. Cases, 23, deaths, 2
Orange Free State				Apr. 1-June 30, 1926 Cases, 24, deaths, 4 July 1-31, 1926 Cases, 7
Brandford district	Oct 10-16			Outbreak on farm
Transvaal				Apr. 1-June 30, 1926 Cases, 10; deaths, 5 July 1-31, 1926 Cases, 2 Aug 15-21, 1926, outbreaks
Johannesburg	Aug 29-Sept 4	1		Outbreaks.
Walkkerstrom district	June 20-26			Do
Wolmaransstad district	do			Do.
Yugoslavia				Apr. 15-June 30, 1926 Cases, 48; deaths, 7. July 1-Aug. 31, 1926: Cases, 3; deaths, 1.
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr. 1-June 30	8	4	
Nigeria	June 1-30	1	1	

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TREASURY DEPARTMENT

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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

Asst Surg Gen C C PIERCE, *Chief of Division*

The PUBLIC HEALTH REPORTS are issued weekly by the United States Public Health Service through its Division of Sanitary Reports and Statistics, pursuant to acts of Congress approved February 15, 1893, and August 14, 1912

They contain (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world (2) Articles relating to the cause, prevention, or control of disease (3) Other pertinent information regarding sanitation and the conservation of the public health

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PUBLIC HEALTH REPORTS

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AN EPIDEMIOLOGICAL STUDY OF ENDEMIC TYPHUS (BRILL'S DISEASE) IN THE SOUTHEASTERN UNITED STATES

WITH SPECIAL REFERENCE TO ITS MODE OF TRANSMISSION

By KENNETH F MAXCY, Passed Assistant Surgeon, United States Public Health Service

At the beginning of this century it was generally held that typhus fever had disappeared from the United States except for an occasional case imported from Europe or from Mexico.[1]

In 1910 Dr Nathan E Brill (1898, 1910, 1911), of New York, called attention to a typhuslike disease occurring endemically in that city He hesitated to identify it as typhus because of its generally milder course and its occurrence under circumstances different from those usually associated with that disease He accordingly believed that he was dealing with a new clinical entity, "an infectious disease of unknown etiology" Cases of this type have since been known in the United States as Brill's disease.

In 1912 Anderson and Goldberger, who had previously reported on the experimental transmission of Mexican typhus ("tabardillo") to monkeys, were similarly successful in the inoculation of a Rhesus monkey with blood from a case of Brill's disease in New York. They found that, as in "tabardillo," one infection rendered monkeys immune to subsequent inoculations of the same passage virus. Furthermore, monkeys previously infected with Mexican typhus were thereafter found immune to Brill's disease, and vice versa. From these observations they concluded that Brill's disease was, in fact, identical with typhus fever, and this conclusion seems to have been quite promptly and generally accepted.

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[1] August Hirsch, in his "Geographical and Historical Pathology" (Pub by the New Sydenham Society, London, 1883), states that

The proper era of typhus for the United States and Canada begins with the period when immigration from Ireland had set in on a large scale We thus explain the fact that the ports on the east coast of North America have been the headquarters of the disease, and that the largest contingent of the sick has been supplied by the immigrants themselves, or their countrymen with whom they had come in contact On the other hand, it is a noteworthy fact that the most careful search among the plentiful epidemiologic records in the literature of the United States fails to discover a single statement as to the occurrence of typhus in the Mississippi Valley or in the Western States, so that the greater part of the continent appears to enjoy absolute immunity from the disease, and in no part of the whole territory do endemic centers of typhus appear to have formed, notwithstanding importations on a large scale

Besides the Irish, immigrants from other countries of Europe were from time to time responsible for small outbreaks in the cities of the eastern United States.

The endemic center of typhus (tabardillo) in Mexico has in like manner from time to time supplied the States of the southwest with infected immigrants, who have given rise to small outbreaks.

During the year or two following, stimulated by these publications, a considerable number of reports of the occurrence of cases similar to those described by Brill appeared in medical literature. In addition to these and since that time cases of clinical typhus have continued to be reported to the Surgeon General of the United States Public Health Service each year from various parts of the United States, but particularly from the Atlantic seaboard and the States near the Mexican border.

A certain portion of these have been imported, or traceable to infection recently imported from foreign sources. When this has been the case the epidemiological picture has been such as is usually associated with typhus as known in the Old World. For instance, in the fairly numerous instances when typhus has been introduced from Mexico in the last 10 years (Pierce, 1917, Boyd, 1917; Cumming and Senfter, 1917; Armstrong, 1922, Tappan, 1926) the disease has been virulent, the mortality high, and the cases have been in persons obviously lousy or those in contact with them.

On the other hand, there remain a large number of sporadic cases of mild typhus which could not be traced to recent importation and occurring under circumstances which strongly suggested local origin of the infection. In regard to this so-called endemic typhus, Brill originally noted that the epidemiology presented points of difference from that which is generally assigned to typhus. He pointed out that the cases occurred sporadically, without traceable connection with each other, that they seldom, if ever, gave rise to new cases among those in contact with the sick person, that no localized outbreaks occurred, and finally, that their seasonal distribution differed from that of typhus. Later, accepting the identity of the virus with typhus as indicated by the work of Anderson and Goldberger, Brill (1920) was led to raise the question whether some vector other than the louse might not be concerned in the transmission. The same question is raised by Allan (1923) as a result of his observations upon a series of cases occurring in Charlotte, N. C.

In 1922, while detailed as acting State epidemiologist to the State Board of Health of Alabama, the writer had occasion to observe with Havens (Maxcy and Havens, 1923) a number of cases which were identified clinically as the endemic form of typhus described by Brill and which gave a positive Weil-Felix reaction. As the same question with regard to the mode of transmission arose in these cases, an epidemiological study was undertaken under instructions from the Surgeon General in cooperation with local health authorities, and has been continued up to the present. The opportunity for study has been especially favorable, since this section of the United States is little subject to immigration either from Europe or from Mexico; and with cases occurring in the smaller cities and towns one

could exclude more surely the possibility of constant reintroduction of the virus from exotic sources and trace association between cases, if it existed.

EVIDENCE OF PREVALENCE IN SOUTHEASTERN UNITED STATES

Aside from the group of cases occurring in Alabama and in Savannah, Ga., which form the basis of this report, evidence has been collected of the existence of mild typhus in other cities and towns in North and South Carolina, Georgia, and Florida.

The first report from this section of the country was that by Paullin in 1913, in which he described the clinical course of six cases seen by him in Atlanta, Ga. In 1914 Newell and Allan reported 4 cases from Charlotte, N. C. In a later report Allan (1923) gave a detailed account of 24 cases which had occurred in that city, and no contact could be traced with recent arrivals, or, indeed, between any two cases.

In a personal communication (1925) Dr. William A. Smith, chairman of the City Board of Health and Welfare of Charleston, S. C., informed the author that cases of Brill's disease occurred in that city from time to time; that a considerable number, about 15 in all, had been reported within a short space of time two or three years previously. A rapid examination of the records of one of the city hospitals for 1923–1925 by the author revealed three typical clinical cases. Dr. H. Clay Foster (1925) submitted a typical clinical history of a case with a positive Weil-Felix reaction in a woman apparently infected in Beaufort, S. C. Dr. T. P. Waring (1925), of Savannah, made a similar clinical diagnosis on a little girl brought to him from Estill, S. C.

Since the report of Paullin (1913) cases have continued to occur in Atlanta, Ga. Thus there were reported to the city health department in 1920, 1 case; in 1922, 8 cases, and in 1923, 6 cases of typhus. Dr. T. F. Sellers informs me that in the State laboratory from August, 1923, up to November, 1925, 11 blood specimens from patients resident in Atlanta had been found positive by the Weil-Felix reaction. Sydenstricker (1926) has reported 6 cases which have come under his observation at the university hospital, Augusta, and Dr. E. B. Murphey, 1925 (personal communication), of that city is authority for the statement that from 1 to 5 cases have occurred in that city each year since the disease was first recognized in 1915, and that he can recall having seen similar cases as far back as 1906. Information was also obtained through the State department of health of cases of mild typhus occurring during 1924 and 1925 at Waynesboro, Millen, Lagrange, West Point, Gainesville, and Albany, Ga.

For some years an occasional case of typhus has been reported from Jacksonville, Fla.; thus in 1924, 3 cases, in 1925, 2 cases; in 1926 (up to December), 10 cases. The disease has also been reported in Tampa, Dunedin, Jensen, St. Petersburg, Callahan, and Lakeland, Fla.

DATA AVAILABLE FOR PRESENT STUDY

The cases which form the basis of this report are (1) those reported in the State of Alabama, 1922 to 1925, (2) those reported in the city of Savannah, Ga., 1923 to 1925.

A special effort was made by the author and associates in the Alabama State Board of Health to secure full information of the

occurrence of the disease in that State The matter was given some publicity through the medium of the full-time county health officers, having jurisdiction over 50 per cent of the population, through papers read before the State medical society and through the press It is thought, therefore, that so far as the disease was recognized, fairly complete information of its occurrence was obtained. This applies especially to the city of Montgomery, where, with the cooperation of the local physicians, the disease was intensively studied.

During the period of observation a total of 104 cases of clinical typhus were reported in Alabama, 62 of which were confirmed by the Weil-Felix reaction performed in the State laboratories Forty-four of these cases, 28 of which were confirmed by the Weil-Felix, were in Montgomery. An epidemiological case history was made out for each case Of the 44 Montgomery cases the author investigated personally 28; 7 were investigated by Dr C. H. Leach, acting State epidemiologist, and 2 by Dr. L. C Havens, director of the State laboratories. The history form of the remaining 7 was made out from information supplied by the attending physician. Of the 60 cases distributed in other cities and towns of the State only 7 were personally investigated by the author, 1 by Doctor Leach, and 1 by Doctor Havens, information for the remaining 51 being obtained from the local health officer or the physician in attendance.

In Savannah Brill's disease had first been brought to the attention of the medical profession by the report of a case before the local medical society in 1915 by Dr. Lawrence Lee. Beginning in 1923, an epidemiological study of the disease has been conducted by the author in collaboration with Dr. Victor C. Bassett, city health officer. The matter has been brought to the attention of the medical society, and cordial cooperation in the study given by the medical profession of the city.

Of the total of 93 cases reported, 32 have been confirmed by the Weil-Felix reaction. A history form has not been kept, as in the Alabama cases, but attempt has been made to secure certain items of information in each instance; viz, identification, including place of residence and place of business, occupation, recent travel, date of onset, clinical course, contact with preceding cases, secondary cases, presence of lice or other vermin. A majority of the cases have been seen personally by Doctor Bassett during the acute illness. When this was not done the information desired was obtained either by a personal visit to the patient himself after convalescence or from the physician in attendance, or a combination of these. The author has accompanied Doctor Bassett on many of these visits.

IDENTIFICATION AS TYPHUS

It has been tentatively accepted that the disease with which we are dealing in the southeastern United States is typhus, because of

(1) Its clinical identification with Brill's disease (Maxcy, 1926).

(2) The Weil-Felix reaction

(3) The work of Anderson and Goldberger (1912), identifying the virus of Brill's disease with that of Mexican "tabardillo"

(4) The successful transmission of the disease to Rhesus monkeys and to guinea pigs from cases in Savannah and Montgomery by the author, and the character of the reaction in these animals. (Unpublished report.) Further studies of the activity of this virus in experimental animals and its relation to the European virus are in progress.

However, granting that the identification of this disease with typhus may be questioned, it may at least be said that the cases here referred to form a clinical group as distinct and as homologous as measles, that they resemble typhus fever much more closely than they resemble any other recognized specific infection, and that as yet they have not been differentiated from that disease It is in this sense, then, that the designation "endemic typhus" is used in this paper.

EPIDEMIOLOGICAL CHARACTERISTICS

(*a*) *Distribution in Alabama.*—The distribution of the Alabama cases by cities and towns for each of the four years of observation is given in Table I. A majority of these cases occurred in the large cities, Birmingham, Mobile, and Montgomery, the remainder in the small towns. None have so far been reported from isolated country districts, although three of the cases from Covington County during the past year lived on farms.[2]

The disease appears to be largely if not entirely confined to the southern part of the State. The city of Birmingham has three times the population of Mobile and four times that of Montgomery, and yet it has reported only 7 cases as compared with 21 for Mobile and 44 for Montgomery. Inasmuch as the disease has been brought to the attention of the medical profession in Birmingham, and the reporting of communicable diseases is as good in this city as in the others, it is considered unlikely that the difference in incidence is attributable to undiscovered cases. Furthermore, diligent inquiry among physicians and health officers practicing in that part of the State which lies north of Birmingham has failed to reveal a single case during the four-year period.

[2] Dr. H. P. Rankin, county health officer, reports that during 1926 in Coffee County, adjoining Covington, there have been diagnosed 15 cases of Brill's disease These cases were widely distributed in the rural areas of the county and without traceable association.

TABLE I.—*Distribution of cases of endemic typhus in Alabama during four years of observation*

City or town	Population 1920	1922	1923	1924	1925	Total	Confirmed by Weil-Felix
Birmingham	178,806	1	3	2	1	7	4
Montgomery*	43,464	6	6	8	24	44	28
Mobile	60,777	2	------	2	17	21	12
Atmore	1,775	------	------	------	1	1	1
Brewton	2,682	------	------	1	------	1	1
Red Level	385	------	------	------	1	1	1
Andalusia	4,023	------	1	------	5	6	6
Opp	1,556	------	------	------	1	1	1
Troy	5,696	------	2	2	2	6	2
Sampson	1,646	------	1	1	2	4	2
Hartford	1,561	------	1	------	------	1	1
Dothan	10,034	------	------	------	6	6	1
Headland	1,252	2	------	------	2	4	1
Kinston	163	------	------	------	1	1	1
Total	--------	11	14	16	63	104	62

The intermittent occurrence of cases in the small towns is notable. For example, in Troy, Ala., a town of 5,696 population, case T2 became ill on November 18, 1923, case T3 on December 6, 1923, case T5 on March 25, and case T6 on March 26, 1924. No further cases occurred in this town so far as could be ascertained until November, 1925, a year and a half later, when a woman living next door to the house in which case T3 had resided came down with the disease In Sampson, population 1,646, there was a case in 1923; after a period of 14 months another case occurred. In Headland, population 1,252, there were 2 cases in 1922, and no more recognized or reported until 1925. The same characteristic is evident in the time distribution of the Montgomery cases, shown in Table II. A period of 3 to 6 months sometimes elapsed before a new case was reported.

From the information available, therefore, the disease is not uniformly distributed in Alabama. It occurs in certain cities and towns of the southern part of the State Its occurrence is scattered as regards place and time.

(*b*) *Age*—The series of cases is not sufficiently large to permit of a detailed analysis of the age distribution in comparison with that of Old World typhus. By reference to the ages of the Montgomery and Savannah cases, given in Tables III and IV, however, it will be seen that only 3 of 137 cases here recorded were in children under 10 years of age In the first 255 cases recorded by Brill his youngest case was 10 years of age, and there were relatively few under 20.

The mildness of typhus in children is a phenomenon well known to European observers. The consequently greater difficulty of clinical recognition may account for the low incidence recorded in this age group. It is also possible that differences in exposure may play a rôle.

(c) *Sex*—As indicated by Tables V and VI, *the incidence is almost twice as high in the male* as in the female in both the Montgomery and Savannah cases, taken as a whole Of the 24 cases reported by Allan (1923) in Charlotte, N. C, 19 were men. Of 50 cases selected for analysis by Brill (1910) 34 were males. The disproportionately high incidence of the endemic typhus of the United States among men may be due either to greater exposure to infection or to greater susceptibility.

(d) *Race*—In the eastern cities, Boston, New York, and Philadelphia, a large proportion of the cases of Brill's disease have been in persons born in Russia, and in southern Texas and California cases were chiefly among Mexicans, *but in the Southeastern States all the cases, with one or two possible exceptions, have occurred in native-born white Americans* The negro for some unknown reason is almost exempt For example, in Savannah, where negroes in 1920 constituted 47 per cent of the population, only 2 of the 93 cases recorded were in this race, in Alabama, where the population of the State is approximately one-third negro, only 2 of the 104 cases recorded were in negroes Allan remarked upon the absence of cases among this race in Charlotte, N. C

The question arises whether this apparent freedom of the colored race from the disease is a fact or whether it is simply due to lack of recognition and reporting of the disease in this race. The single case in a negro which I personally observed was typical in all respects, very severe, with a well-developed and plainly evident eruption as easily recognizable as in a white person. Practically all the physicians who recognized and reported cases among white people see in their routine practice a certain number of negroes. In Alabama a large proportion of the cases of continued fever, particularly where typhoid is suspected, are seen by the whole-time health officers. At Savannah, at Montgomery, and at Mobile a large number of the blood specimens which were submitted to the public health laboratories for the Widal test, as well as a considerable number of sera submitted for the Wassermann tests, were run against the Weil-Felix organism, with negative results so far as negroes are concerned, although by the same procedure a number of unrecognized cases among white persons were uncovered. With the available evidence, therefore, while the low incidence among the colored race may be in part accounted for by lack of recognition and reporting, this factor would seem not to account for all of the discrepancy. *The relative freedom of the negro from the disease is a fact which remains to be explained.*

(c) *Seasonal distribution.*—

TABLE II.—*Seasonal distribution of cases*

	Year	Jan	Feb	Mar.	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Savannah, Ga	1923	-----	-----	-----	-----	-----	-----	7	8	6	11	5	1	38
	1924	-----	-----	1	-----	2	1	1	-----	4	2	2	1	14
	1925	2	-----	1	3	3	0	9	7	1	8	4	3	41
		2	-----	2	3	5	1	17	15	11	21	11	5	93
Montgomery, Ala	1922	-----	-----	-----	-----	-----	1	-----	-----	-----	1	3	1	6
	1923	1	1	-----	-----	-----	-----	-----	-----	1	-----	2	1	6
	1924	-----	-----	-----	1	-----	-----	-----	3	-----	-----	2	2	8
	1925	-----	1	1	1	1	1	3	5	7	2	1	1	24
		1	2	1	2	1	2	3	8	8	3	8	5	44
Other cities and towns in Alabama	1922	-----	-----	-----	-----	-----	-----	4	1	-----	-----	-----	-----	5
	1923	-----	1	-----	-----	-----	-----	-----	-----	2	1	2	2	8
	1924	-----	-----	2	-----	-----	1	-----	2	-----	1	1	1	8
	1925	2	-----	-----	-----	3	2	5	7	4	4	6	6	39
		2	1	2	-----	3	3	9	10	6	6	9	9	60
Grand total	-----	5	3	5	5	9	6	29	33	25	30	28	19	197

A tabulation of the cases reported by months (see Table II) shows that although the disease occurs in all months of the year, it reaches maximum incidence in the summer and fall. This characteristic has been constant through the four years of observation.

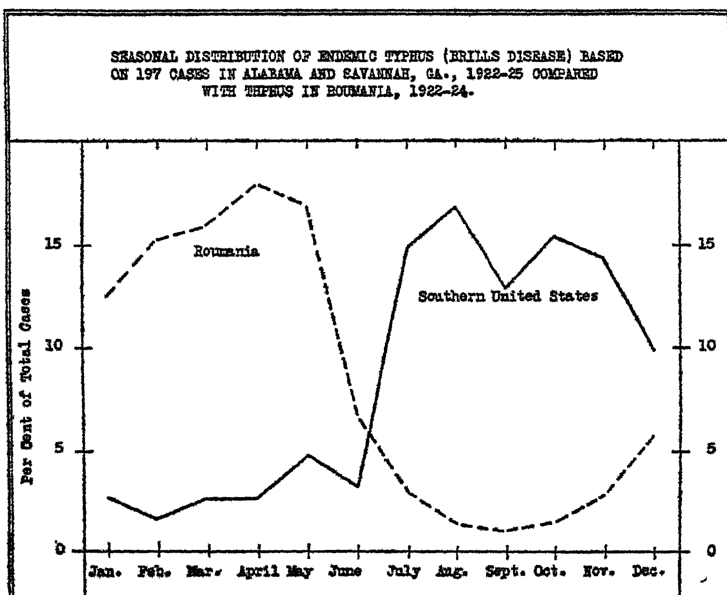
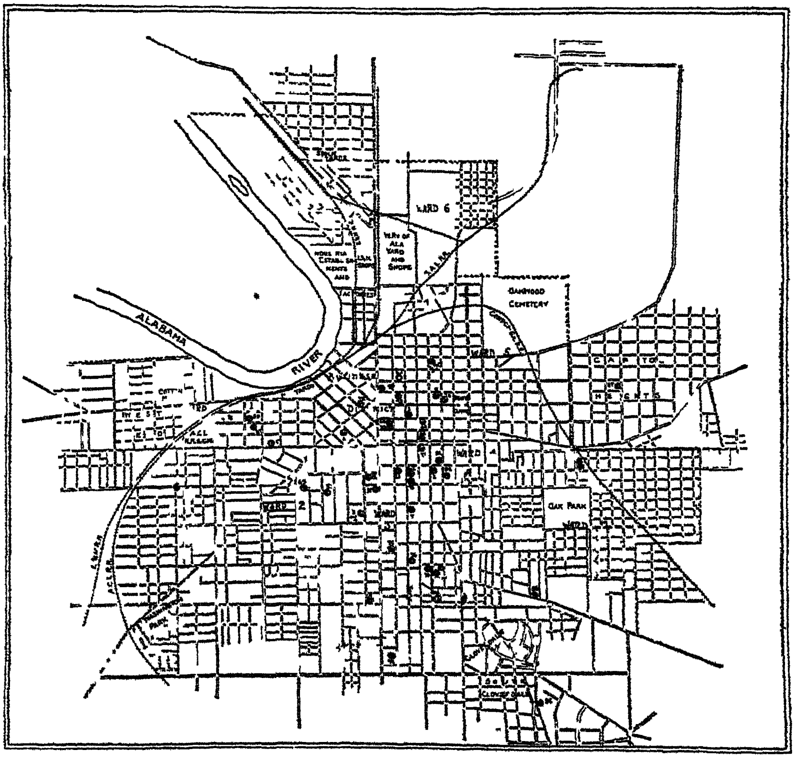


Fig. 1.

A similar seasonal distribution was found in New York City by Brill, who in his last report (1920), based upon an experience of 500 cases over a period of some twenty-odd years, stated that 70 per cent occurred from June to November.

The summer and fall maximum of the endemic typhus of the United States is in direct contrast with the high winter and spring incidence of typhus in the Old World. This is shown in the accompanying graph, in which the curve given by seasonal distribution of the 197 cases of endemic typhus which are analyzed in this report is compared with the curve for typhus in Rumania, 1922–1924 (League of Nations, 1925). The seasonal distribution of the disease in Russia, 1920–1924, and in Poland, 1922–1924, is similar to that of Rumania. Typhus is



MAP No 1.—Cases of mild typhus (Brill's disease) in Montgomery, Ala., 1922–1925, spotted according to residence

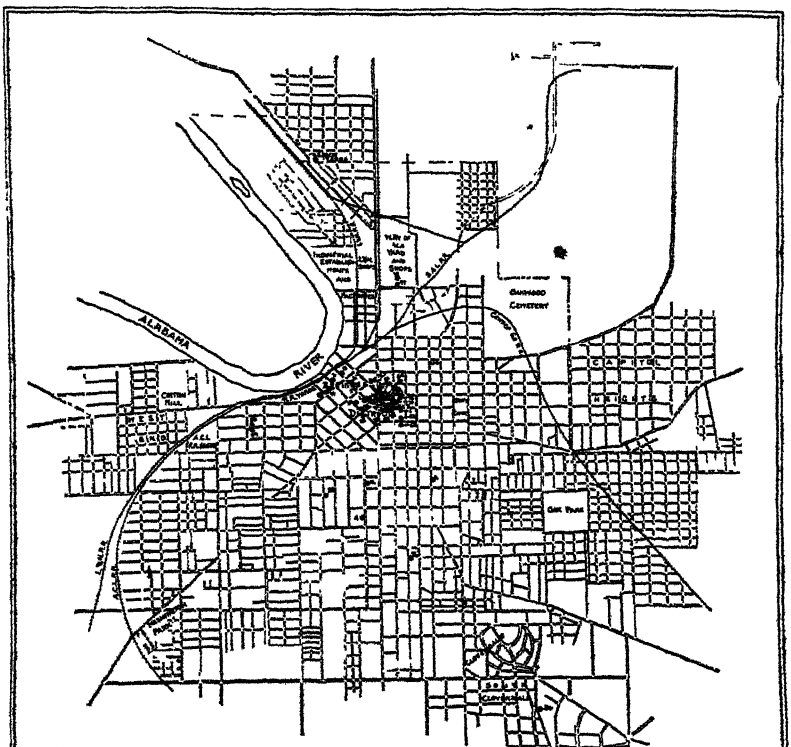
generally accepted to be a disease of the colder months; but the endemic disease of the United States is at a minimum during the colder months.

(*f*) *Location by residence.*—A study of the cases which occurred in Montgomery, located according to place of residence, as shown in map No. 1, suggests a tendency toward focalization in the central portion of the city in and near the business district. The question arises whether this apparent concentration is merely the result of a greater density of population in that part of the city. The 39 cases

living within the city limits were distributed among the seven city wards as follows:

Ward	Population, United States census 1920	Number of cases	Case rate per 1,000 population	Ward	Population, United States census 1920	Number of cases	Case rate per 1,000 population
1	5,636	4	0.71	5	5,044	4	0.74
2	9,405	4	.43	6	4,075	4	.98
3	4,147	8	1.98	7	8,122	5	.62
4	7,035	10	1.42				

This division of the city is peculiarly unfavorable for the purposes in mind, inasmuch as the wards are arranged radially in such manner that all except one (ward 7) include portions of the central part of



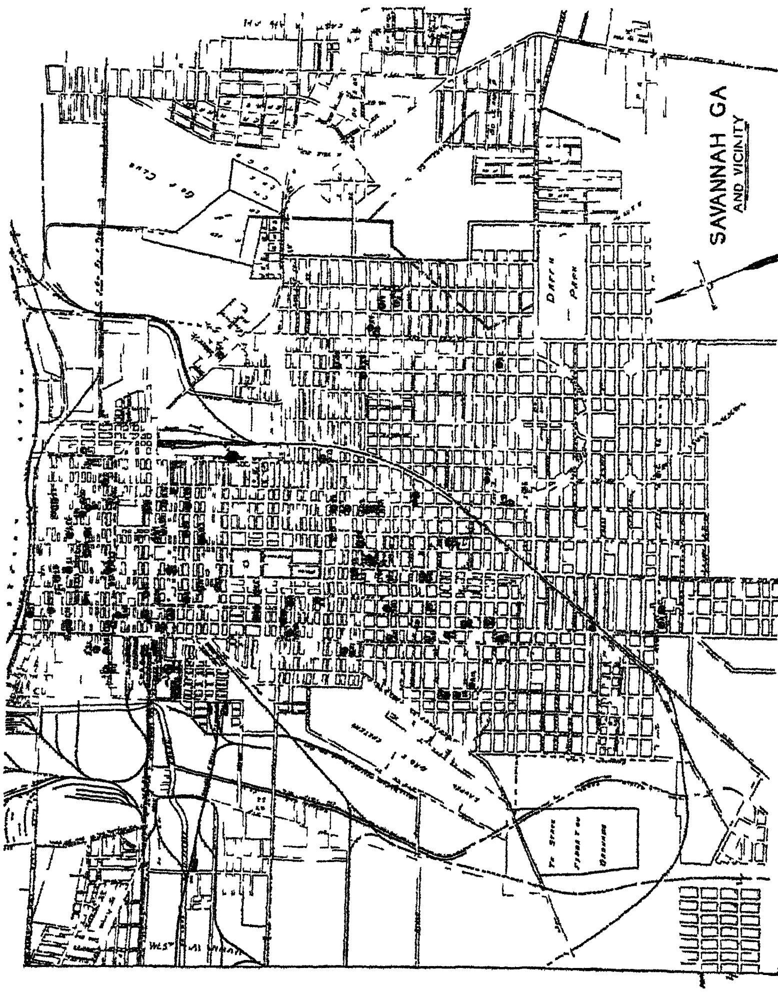
MAP NO 2.—Cases of mild typhus (Brill's disease) in Montgomery, Ala., 1922-1925, spotted according to place of employment, or if unemployed according to place of residence

the city. Even though this be true, the tabulation indicates a slight excess of cases in wards 3 and 4, which include a large portion of the older residential section bordering upon the business district.

In map No. 3 the Savannah cases have in like manner been shown according to their places of residence. The distribution appears to

be rather general, except perhaps for the newer residential portions and the outlying districts, where the incidence is apparently light. Population figures by wards for this city are not available in the United States census, and it is therefore not possible to compare rates for the different sections.

Summing up the data on location of cases by residence in both cities, one is impressed with the fact that the cases are scattered in

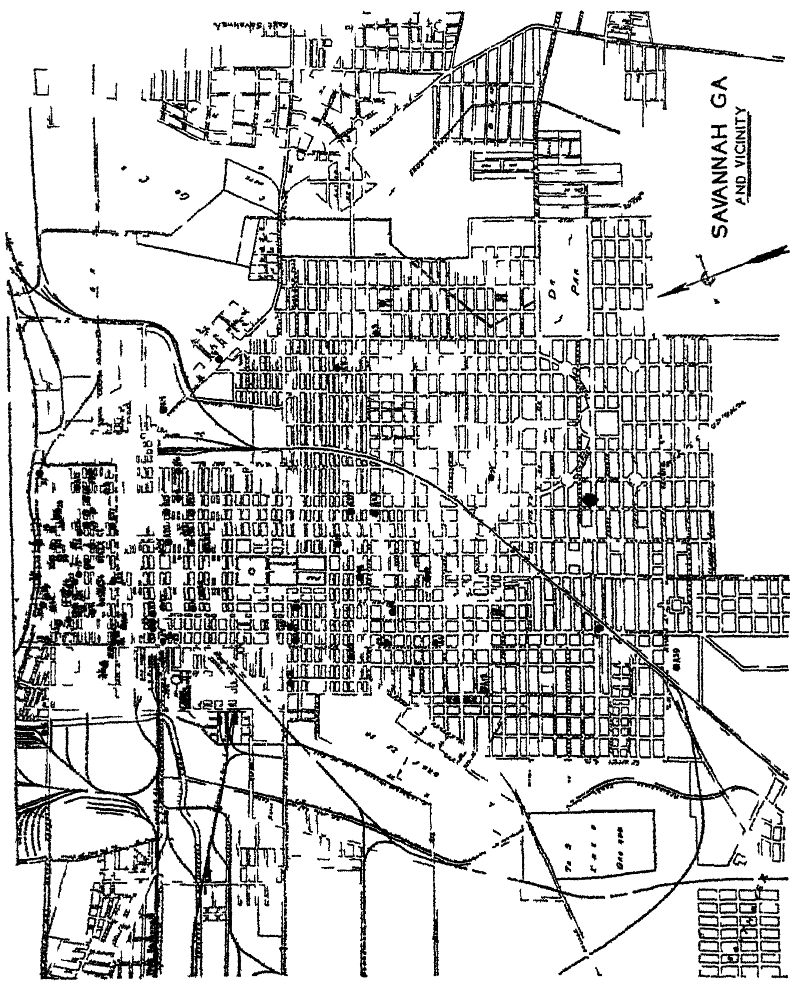


MAP No 3 —Cases of mild typhus (Brill's disease) in Savannah, Ga., 1923-1925, spotted according to residence

the sense that *there are no sharply localized neighborhood outbreaks.* However, there seems to be a tendency for the cases to occur more frequently in the older, more centrally located residential districts.

(*g*) *Location by place of business.*—Since an employed person is exposed to an even greater number of contacts at the place of business than in his home, the grouping of cases on this basis was also exam-

ined In map No 3 the Montgomery cases have been indicated according to place where employed, or if unemployed according to residence *This map suggests a focal center of the disease in the heart of the business district* A large proportion of the cases were employed (or lived, if unemployed) within four city squares of the corner of North Court and Monroe Streets This section of the



MAP NO 4 —Cases of mild typhus (Brill's disease) in Savannah, Ga, 1923 1925, spotted according to place of employment, or if not employed within the city limits according to residence

business district is largely made up of retail stores and markets, clothing stores, drug stores, grocery stores, butcher shops, fruit stands, seed and grain stores, etc

In map No. 4 the Savannah cases have been spotted in like manner according to place where employed, or if unemployed within the city, according to residence There is a similar grouping in the retail business section, but the disease is not so sharply focalized as in

Montgomery. Attention is called particularly to the point marked by a cross, the location of the food-marketing center of the city.

(*h*) *Occupation.*—The apparent focalization of the disease in the business district may be due to a concentration of employed persons in this area, or to a greater risk in certain occupations which are located in this part of the city. Evidence on this point has been obtained by an analysis of the cases according to the broad occupational groupings afforded by the United States census and presented in Tables V and VI.

In Montgomery 18 of the 29 cases in males (62 per cent) were engaged in "trade" (clerks, proprietors, managers, salesmen, dealers, etc), although only 23 per cent of the total number of occupied males over 10 years of age are so engaged. Only 1 case occurred among the 4,114 men employed in "manufacturing and mechanical industries"; 3 among the 2,608 men in "transportation." The 3 cases charged to "domestic and personal service" were employed in restaurants.

Similarly, in Savannah 23 of the 52 males (44 per cent) were in "trade," although only 17 per cent of the total number of occupied males are so engaged. The rates in "manufacturing and mechanical industries" and in "transportation" are comparatively low. In "agriculture, forestry, and animal husbandry" the cases consisted of 4 employed by dairies and 2 retired farmers; in "domestic and personal service" 4 employed in restaurants, 1 barber, and 1 hotel keeper.

Among employed females the distribution is much the same in both cities, though the groups are small. In both instances the highest incidence is found in "trade," the rate being approximately the same as for males in this group alone.

Using a different basis of classification, and the occupations as given in Tables III and IV, it is notable that in Montgomery 10 of the 32 employed persons (31 per cent) who had typhus were engaged in handling foods, groceries, meat, produce, feed, flour, or were employed in feed stores and restaurants. In Savannah 20 of 59 employed persons (34 per cent) having the disease were so engaged. The apparent excess of cases among food handlers is strikingly similar in the two cities, as are the rates for both males and females in "trade."

These analyses of the occupations of persons attacked by endemic typhus suggest very strongly that as compared with the rest of the population those engaged in "trade," and especially those employed in food depots, groceries, feed stores, and restaurants, are exposed to a distinctly increased risk of infection.

(*i*) *Social status.*—The occupational analysis also brings out the fact that the disease attacked, for the most part, persons earning a

reasonably good livelihood. There is a notable absence of cases among unskilled laborers and unemployed males

From personal observation of the cases and their surroundings the author and his collaborators are convinced that the disease did not select the poor and uncleanly It occurred among all classes The cases so far as they were discovered present a fair cross section of the social strata of the average American community This implies that a great majority of the cases were in persons cleanly in their homes and in their personal habits

There were no cases among the inmates of jails, prisons, or asylums There was no particular association of the disease with cheap boarding or rooming houses. The time-honored characteristics of Old World typhus were entirely lacking in this respect

(*j*) *Contact between cases* —One of the items of information on the case history form used in the Alabama series was, "History of Contact with Antecedent Case." In only one instance among the 44 cases in Montgomery was the patient or the physician in attendance or the investigator able to state that there was definite close association within three weeks prior to onset with a case of the same disease or a suspected case. The one exception was case No 4, who came down eight days after her husband

Of the 60 cases occurring in other parts of Alabama for whom a case history form was filed, in no instance was the patient or his physician aware of contact of the type described with a preceding case

The same statement holds true for the Savannah cases with the following exceptions:

Case 32 came down about seven days after his wife and two children had become ill with the same disease.

Case 27, onset July 5; case 35, onset July 27; and case 39, onset August 7, were employed in a large wholesale grocery store They were thus in casual contact at their place of business.

Case 28, onset June 25; case 32, onset July 9; and case 36 (fatal), onset August 12, worked on the same dairy farm and were in contact in their work. It will be noted that these cases occurred about the same time as those in the wholesale grocery store noted above. The dairy purchased feed from this store during the period involved, but personal contact of the men on the dairy farm with the men in the store could not be demonstrated. There were no known cases of typhus among the 100 or more patrons of the dairy.

It is thus seen that known contact with a preceding case is a very rare finding. It must be admitted, of course, that close contacts may have existed but were undiscovered, particularly in those cases in which dependence was placed entirely upon information supplied by the attending physician and his patient. On the other hand,

it seems quite unlikely that any considerable number of actually traceable contacts with sick persons or convalescents should have been overlooked

Moreover, there is evidence from another angle that the disease as observed in this study was not readily communicable from person to person. For each case that occurred there were a number of persons in intimate contact with the patient, including other members of the family, physicians, nurses, and visitors Notwithstanding the absence of prophylactic measures, infections among these known intimate contacts were rare

Among the 197 cases on which this report is based there were only two instances, noted above, in which more than one case occurred in a family in such sequence as to suggest the possibility that the earlier case might have infected the later one.

Eighteen of the 93 Savannah cases and 6 of the 44 Montgomery cases were hospitalized No effort was made to delouse the patient upon admission to the hospital; no precautions whatever were taken with regard to lice Not a single case has occurred among nurses attendants, physicians, or fellow patients. One physician had the disease in Montgomery, but he stated positively that he had not attended a case of known or suspected typhus for at least one month before the onset of his illness

Brill (1920) states that in over 500 cases of endemic typhus observed by him in New York City there have been only two instances in which more than one member of a family has been infected with the disease at the same time or nearly the same time Many of the New York cases have been hospitalized, from 15 to 30 being reported in that city each year since 1912, but no contact cases among patients, nurses, or doctors have been reported.

Allan (1923) was unable to trace any contact from case to case at Charlotte, N C In this connection mention should also be made of the numerous other cases reported in the literature and to the Surgeon General which have been sporadic and without secondary spread.

By way of contrast attention is called to Boyd's report (1917) of a small outbreak of Mexican typhus ("tabardillo") in Iowa. During 1915–1918 a considerable epidemic of "tabardillo" raged in Mexico, and as a consequence sporadic outbreaks were originated in American territory by imported laborers. A Mexican laborer was admitted to the Santa Fe Railroad hospital, Fort Madison, Iowa. It was later discovered that he had typhus, and lice were found upon his clothes. Following the diagnosis of his case, the physician who examined him on admission, the nurse who took charge of his clothing, two male nurses who attended him, and two other hospital patients came down with the disease within 30 days.

The lack of traceable relationship between cases and the extremely low secondary familial attack rate is a striking and constant characteristic of the endemic typhus of the United States.

Multiple cases on the same premises.—Although cases have so rarely been observed in the same family in such close sequence as to suggest communication of the disease during its acute febrile stage, several instances have been noted in which cases recurred on the same premises separated by intervals of six months or more

In Montgomery Mrs. R , living at ——— Columbus Street, had a typical attack of Brill's disease in December, 1922 Three years later, in September, 1925, while living at the same address, her husband had the disease.

In Savannah, at ——— Abercorn Street, there is an old frame building with a store on the first floor and a housekeeping flat on the second In August, 1923, a butcher who operated a meat market in the rear of the store had typhus Eighteen months later, in January, 1925, his father-in-law, who lived with him and also assisted him in the meat shop, had the disease In the flat above the store lived a family of nine persons; they had occupied these premises for eight years with the exception of six months in 1924. One of this family, Mrs. M., had the disease in August, 1925, seven months after the preceding case Although treated at home, there were no other cases in the family, nor was it possible to obtain a history of any previous cases in this family.[3]

Louse infestation—In view of the evidence that the disease is typhus, and that typhus, as known in the Old World, is transmitted from man to man by the louse, as careful inquiry as possible was made in each case to detect lice or any evidence suggesting prior infestation with them This inqury consisted in asking the physician in attendance and the patient, in all cases investigated, whether louse infestation had been noticed, or, indeed, whether the patient had noticed insect bites of any kind. In all cases investigated by the author in Alabama and in the few seen in Savannah search was made for nits or live insects on the hair of the head and body and on the bedclothes, and for scratch marks on the skin which might suggest infestation; at the same time other members of the family who were present were inspected and the environment was surveyed with the same purpose in view. Doctor Bassett has made the same search in all patients sick with this disease which he has seen in Savannah;

[3] In addition to these instances, two more have been noted in 1926. In the large wholesale grocery and feed store to which reference has been made under "Contact," in which three cases occurred during the summer of 1925, the manager became ill with the disease in August, 1926, no cases having occurred among other employees, so far as could be ascertained, in the meantime. A lunch room near by, in which case No. 1 (July, 1923) was employed, recently changed owners, and the new owner, case S48, came down with the disease in August, 1926. In the same neighborhood D K., a dealer in hides, furs, and chickens, was taken ill in June, 1926, followed by another worker in the same establishment six weeks later. There were no cases among the family contacts of either.

in addition, in some few instances, he has carefully searched the clothing worn by the patient prior to his illness. Every physician who has attended a case of Brill's disease which came to the author's attention has been questioned with regard to the presence of lice on his patient.

In Alabama such inquiry has been uniformly negative, except that in 1 out of 104 cases there was a history of a young girl living in the same house with the patient having had head lice three months previous to the onset

The inquiry in the 93 cases in Savannah was similarly negative with two exceptions: In case S12, 1923, proprietor of a cheap clothing store, a Jew, the attending physician made a positive statement that he had seen lice on the person and bed of the patient, in case S15, a negro, clinically positive for typhus, a health department inspector who had been sent to clean up the premises of the patient after his removal to the hospital stated that he had seen vermin on the bedclothes In neither instance were there secondary cases in the household or among the known contacts of the patient.

While this evidence does not in any single case exclude the possibility that the patient may have been bitten by one or more lice prior to the onset of the disease, or may have had a light infestation which was not discovered, it does suffice to definitely establish that *the disease was not associated with lousiness* This much is, indeed, sufficiently well established by the geographic and social distribution of the disease, a considerable proportion of the cases having occurred in persons of such habits and living in such an environment that the harboring of lice is not to be suspected.

DISCUSSION

The evidence thus far adduced indicates that there is endemic in the southeastern United States a disease which is as yet indistinguishable from Old World typhus, clinically and serologically, except with regard to its relatively mild clinical course and low fatality rate. It appears to be identical with the disease described by Brill as endemic in New York City. On the other hand, the epidemiological characteristics of this disease present certain points of difference with Old World typhus which appear to be significant. They relate principally to the mode of transmission.

The louse (*P. humanus* var *corporis* and *P. humanus* var. *capitis*) has been satisfactorily proven to be the usual—not necessarily the only—vector of Old World epidemic typhus. Transmission of the virus from man to man is accomplished by the agency of this insect. Reviewing the observations which have thus far been made upon the endemic typhus of the southeastern United States, consideration may

be given to the evidence for and against transmission from man to man by the louse.

As regards positive evidence which would suggest association of this disease with lice, not a single circumstance has been discovered which suggests such a mode of transmission In other words, if this disease had been considered as one of altogether unknown etiology, with no prior assumption as to its mode of transmission, the facts which have been brought out with respect to the cases observed in Alabama and Savannah, Ga , would not even give rise to the suspicion that infection was transmitted by the louse Of positive evidence tending to incriminate the louse, then, this study yields none.

Moreover, there are certain facts which weigh distinctly against the supposition that the disease, as observed in these areas, has been transmitted by lice. These are:

I. The seasonal distribution of the disease, reaching its maximum in the warm weather of summer and autumn, is the reverse of the seasonal distribution of diseases known to be louse-borne—Old World typhus, relapsing fever, trench fever, which characteristically reach their highest prevalence in the colder months of winter and spring

II. The social and environmental distribution of the disease is not such as would be expected, and in a vast majority of cases (all but 2 in a series of 197) absolutely no evidence of louse infestation was discovered It is in accordance with experience that cleanly persons upon whom lice can not establish themselves may occasionally be bitten by lice accidentally picked up, and that people of this class may consequently become infected with a louse-borne disease, especially such as are in close contact with louse-infested patients. It is, however, contrary to all experience of Old World typhus and relapsing fever, known louse-borne diseases, that infection should be almost *exclusively confined* to persons who are not demonstrably infested, as has been the case here It seems, indeed, almost inconceivable that in a louse-borne infection there should be such *absence* of association with lice.

III. As a corollary of the preceding, the lack of evidence of direct communicability, after a considerable period of observation, is not in accord with common experience in louse-borne diseases. The fact that contacts of the observed cases have rarely been infected is not by itself evidence against louse-borne infection, since these patients, being not lousy, would not be expected to spread the disease. On the other hand, it is a remarkable circumstance that the undiscovered cases which must have existed, if the disease be transmitted in this way, did not cause here and there small localized outbreaks in a labor gang, boarding house, or some equivalent group.

IV. Finally, reviewing the distribution of this disease and the circumstances existing in the communities studied, the facts seem

to be incompatible with the assumption that the infection has been conveyed by lice under the conditions which are generally accepted as governing the transmission of Old World typhus (Arkwright, 1920), based upon the present status of epidemiological and experimental evidence in that disease. These conditions may be briefly summarized as follows:

(1) That the virus exists in nature only (*a*) in the blood and tissues of infected human beings, and (*b*), in the bodies of lice which have fed upon such persons.

(2) That man is infective for the louse only for a brief period, namely, from the onset of the disease until defervescence has been established, a matter of two or three weeks.

(3) That one attack in man confers a definite, high, and durable immunity.

(4) That the louse, having bitten an infective man, after a period of five or six days is capable of conveying the infection to other persons by its bite.

(5) That the louse remains infective during the remainder of its life, a matter at most of two or three months (Nuttall, 1917).

(6) Almost all attempts to demonstrate the inheritance of infectivity in the louse have failed.[4]

To maintain the disease under these conditions of transmission, therefore, there must be available a supply of infective lice, renewed at frequent intervals by the occurrence of cases in lousy persons, either infected locally or imported. For *sustained endemic* prevalence, not tending to decline, the louse infestation of the population must be sufficient to establish on the average at least one new human infection for every one that is terminated by death or recovery. Otherwise the prevalence will decline. To meet these conditions a certain proportion of the cases, probably a majority of them, must occur in persons sufficiently infested with lice to serve as foci for the infection of others, since the cases which may occur in uninfested persons bitten casually by stray lice and living in a clean environment would not contribute to the further spread of the infection.

As to the communities considered in this study, it seems doubtful that the louse infestation of their population is sufficient to sustain an infection subject to these conditions of transmission. Obvious lousiness—heavy infestation with body lice—is an exceedingly rare

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[4] The above are given as the conditions of transmission which seem to be generally accepted for Old World typhus. It can not be said that all these conditions have been rigidly proven. For instance the possibility has not been excluded that the virus of typhus may have some mammalian host other than man, and in fact the existence of such a reservoir is suggested by the susceptibility of certain of the lower animals to experimental infection. Nor has it been proven that the louse is the only actual or potential insect vector, or that the infection is never transmitted to the progeny of infected lice. Likewise, while there is no positive evidence of long continued infectivity of man, the possibility of occasional prolonged latent infection has not been excluded.

condition in the southern United States. The climate is mild; the winters are short; even the poorer population are relatively cleanly in person and surroundings. Lice are looked upon as a disgrace, and strenuous efforts are made to destroy them when they are found. They are occasionally encountered on beggars, vagabonds, or destitute and debilitated persons Jails, institutions caring for the poor, and cheap lodging houses sometimes become infested. No outbreaks of this disease have been traced to such places

Allan (1923), commenting upon the absence of lice in the cases which he reported, stated that in 15 years of dispensary and office practice in Charlotte, N C, he has never seen body lice on a patient. His experience in this regard is not different from that of a great many other physicians in this section of the country who have been questioned

Head lice are not so very uncommon in school children, inspections sometimes reveal as high as 4 or 5 per cent infestation in the poorer sections. In Montgomery head lice were found on a few children in three schools during 1924–25, but less than 1 per cent of the school population was affected. No relationship could be traced between these schools and the occurrence of cases.

With these observations in mind as regards the cases and the communities in which they have occurred, in order to account for the existence of a louse-borne person to person transmission in this disease in the southeastern United States one must assume the existence during at least three years of a *concealed* reservoir of infection in lousy persons, either (*a*) in the form of clinically recognizable cases which have somehow remained undiscovered by the investigation, or else (*b*) in a clinically unrecognizable form as larval cases (the "typhus exanthematique inapparent" of Charles Nicolle, 1925) or as passive carriers of the virus.

With regard to the first of these assumptions, it seems most improbable that clinically recognizable infections in louse-infested individuals should have been overlooked while such numbers of cases in vermin-free persons were discovered. Such a circumstance is the more unlikely because the cases in lousy individuals would, as has been pointed out already, give rise to household epidemics, which would attract attention.

Regarding the alternative assumption that the infection may have been spread from clinically unrecognizable cases which have occurred in lousy persons, it is undoubtedly true that mild atypical cases occur and that these may escape diagnosis, especially if the eruption is not well developed. As a result of having done a large number of Weil-Felix reactions on blood specimens from febrile cases suspected of being typhoid or typhus, it seems unlikely that abortive infections form a very appreciable proportion of the total number,

and there is no particular reason why they should be more common in the lousy than in the nonlousy.

Concerning the existence among human beings of a large number of "inapparent infections" in the sense of Nicolle, there is little evidence to support his hypothesis. Nicolle reasons that they do exist by analogy with what occurs when certain rodents are inoculated with virus in the laboratory The response of human beings to infection naturally acquired can hardly be compared with that of rodents artificially inoculated.

Human carriers of typhus virus have never been demonstrated, and from present knowledge it seems quite unlikely that they exist. The disease is apparently a blood-stream infection with localization in certain organs of the body, chiefly brain, spleen, and liver. It has been repeatedly shown experimentally that the virus disappears from the blood at the time of convalescence, or within a day or two after the temperature returns to normal. The virus has not yet been demonstrated in the discharges of the body. Upon recovery a sharp immunity is established

In order to account for the transmission of the disease from man to man by the louse under the conditions which exist in the southeastern United States, it seems necessary to assume an entirely altered conception of this disease, a conception which does not appear to be in harmony with the established facts, experimental and epidemiological, so far as they have been ascertained. In fact, whatever the means of transmission from man to man, if it be assumed that it is an exclusively human infection, then it must exist largely in unrecognized form, since it is evident that the recognized cases do not link together. These considerations have led to a tentative rejection of the human louse as the principal vector and of man as the principal reservoir of the disease in this part of the United States and the search for some other mode of transmission.

It is generally accepted that typhus—and hence the disease with which we are dealing—belongs to that group of diseases known as the "rickettsiæ." In addition to typhus, this group includes Rocky Mountain spotted fever, trench fever, Tsutsugamushi disease (including the variety described by Schuffner (1910) and by Walch and Keukenschrijver (1925) in Sumatra), and heartwater, a disease of sheep, goats, and cattle in South Africa described by Cowdry (1925). These five diseases possess certain features in common. They are acute infections transmitted by blood-feeding insects or arachnids; they exhibit a fairly high fever, running a relatively definite short course; a single attack confers upon the survivors a comparatively high degree of immunity for a period of months or years, or even for life. There is invariably more or less involvement

of the nervous system and there is a characteristic exanthem in all, with the single exception of heartwater. It seems reasonably well established that the etiologic agent of each belongs to the rickettsiæ defined by Cowdry (1925) as follows:

"Gram-negative, bacteriumlike organisms of small size, usually less than half a micron in diameter, which are found intracellularly in arthropods, which may be more or less pleomorphic and stain rather lightly with aniline dyes, but which resemble in most of their properties the type species, *R prowazeki*"

While the rickettsiæ which have been described in these diseases typically inhabit arthropod tissues, it is questionable whether an arthropod reservoir of the parasites can exist indefinitely. In Rocky Mountain spotted fever, although hereditary transmission in the tick has been demonstrated, it is not yet known through how many generations the virus can be continued in its arthropod host. Wild rodents, such as rabbits and ground squirrels, probably play a rôle in maintaining the reservoir of the virus from which man becomes infected accidentally. In Japanese river fever the vector is a mite, *T. akamushi*, found in great numbers within the ears of the field mouse (*Microtus montebelli*), which probably acts as a reservoir of the virus. Walch has brought evidence to indicate that in Sumatra *T. dehensis*, likewise a parasite of the field rat, is responsible for the transmission of the pseudotyphus of Deli Little is known of trench fever beyond its transmission from man to man by the louse In heartwater Cowdry has found that hereditary transmission of the virus in ticks does not occur, hence some other reservoir of the virus is necessary for its maintenance; presumably the sheep, goats, and cattle sick with heartwater afford this, though the possibility of a reservoir existing among small rodents has not been excluded.

In typhus fever it has been shown by Nicolle and others that beside the chimpanzee and the monkey certain small rodents are susceptible to the virus; i e, guinea pigs, rabbits, rats (white and gray), mice (white), the gerbille. In a recent publication Nicolle (1926) reports a second series of passages of typhus virus through 12 generations of white rats.

In view of these considerations the question arises whether in the endemic typhus of the southeastern United States a reservoir of the disease may not exist other than in man, a rodent reservoir with accidental transmission to man through the bite of some parasitic blood-sucking insect or arachnid. Such a hypothesis is compatible with the epidemiological characteristics which have been presented, namely, (1) the uneven focal distribution of the disease; (2) its sporadic occurrence; (3) its apparent lack of direct communicability from an infected person; (4) its association with the place of business

rather than with the home, particularly with those premises upon which foodstuffs are handled or stored; (5) the recurrence of cases on the same premises after considerable intervals of time; and (6) its seasonal incidence

Obviously the rodents upon which suspicion immediately falls are rats and mice, and the parasitic intermediaries which are first suspected are fleas, mites, or possibly ticks

Without desiring to emphasize the analogy, there is similarity between the epidemiology of this disease and that of plague as observed in the southern United States

It is interesting to note also that the observations with regard to this typhuslike disease in the southeastern United States are not peculiar to this country Many reports of a similar nature have appeared in medical literature in recent years from various parts of the world Attention is called particularly to those from Australia and from the Federated Malay States.

Hone (1922), in a series of papers, has described a situation in and around Adelaide strikingly similar to the one here reported for Savannah or Montgomery. The first 13 cases studied were in men who handled wheat, and later cases showed an apparent relationship to the handling of foodstuffs More recently Wheatland (1926) has reported a small epidemic of cases of mild typhus, giving a positive Weil-Felix, from a district surrounding Toowoomba, Australia The occurrence of these cases seemed to be associated with a migration of mice, accompanied by an epizootic, and were at first called "mouse fever"

According to Fletcher and Lesslar (1925) typhus was never recognized in the Federated Malay States until 1924 Between August, 1924, and January, 1925, a diagnosis of typhus was made in 18 cases, 7 of which were in Europeans. The disease was sporadic in occurrence; there was no evidence of the direct infection from man to man, and apparently there was an association of the disease with cattle keepers and with a camping ground that was notorious for its rats

In summary, despite the clinical, serological, and experimental evidence as to the identity of these cases in the southeastern United States with Old World typhus and "tabardillo," there are significant divergencies in the epidemiology. These lead to a tentative rejection of transmission from human to human through the louse as explaining the distribution of this endemic disease, and suggest the existence of some other mechanism for the propagation of the virus. From a consideration of what is known of this group of diseases, the "rickettsias," and specifically with regard to the susceptibility of rodents to typhus virus, it seems probable that a

reservoir may exist apart from man. A reservoir in rats or mice, with accidental transmission to man through the bite of some parasitic blood-sucking arthropod, is compatible with the epidemiological characteristics which have been revealed by this study of the disease in Alabama and Savannah, Ga Some experimental studies designed to test the theory of the existence of a rodent reservoir of the infection are now in progress in the hygienic laboratory of the Public Health Service, but have not yet progressed far enough for a report.

CONCLUSIONS

1. A disease giving a positive Weil-Felix reaction, and clinically indistinguishable from typhus fever except with regard to its relative mildness and low fatality rate is endemic in the southeastern United States.

2. The epidemiology of this disease appears to differ significantly from that of Old World typhus

3. The epidemiological characteristics afford no evidence suggesting louse transmission and are interpreted as being at variance with man-to-man transfer by lice, unless it be assumed at the same time that the disease occurs mostly in unrecognizable form.

4. It is suggested as an hypothesis which seems to afford a more probable explanation of the mode of transmission that a reservoir exists other than in man, and that this reservoir is in rodents, probably rats or mice, from which the disease is occasionally transmitted to man.[5]

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[5] This theory of the source and transmission of the "endemic typhus" referred to in this paper does not necessarily deny the identity of that disease with Old World typhus, for while it is satisfactorily proven that in its epidemic form typhus is transmitted from man to man by the agency of the louse, there remains the possibility—unsupported by positive evidence but not yet excluded—that the disease may exist also in rodents, and that in the intervals between epidemics the infection may be carried over in this reservoir.

TABLE III.—*Cases of Brill's disease occurring in Montgomery, Ala., 1922–1925*

Case No.	Race	Sex	Age	Occupation	Date of onset	Weil-Felix day after onset	Reaction result	Remarks
					1922			
1	W	M	28	Waiter in cafeteria	June 5	5th	Neg	
						8th	Pos 1-800	
2	W	F	3[illegible]	Housewife	Oct 8	14th	Pos 1-640	
3	W	M	30	Proprietor bottling works	Nov 12	25th	Pos 1-320	
4	W	F	[illegible]	Housewife	Nov 20	10th	Pos 1-160	Wife of No. 3
5	W	M	35	Clerk in pool room and lunch counter	Nov 25	15th	Pos 1-1,280	
6	W	F	60	Housewife	Dec 19	8th	Neg 1-[illegible]	
					1923			
7	W	M	33	Manager clothing store	Jan 7	8th	Neg	
8	W	M	35	[illegible] employee	Feb 15	6th	Neg 1-50	
11	W	[illegible]	[illegible]	[illegible]	Sept 22	5th	Neg 1-20	
						14th	Pos 1-[illegible]	
12	W	F	[illegible]	Housewife	Dec 1	11th	Pos 1-1,280	Wife of No. 77
13	W	M	22	Employee wholesale shoe store	Nov [illegible]	4th	Pos 1-320	
14	W	M	26	Employee railroad yards	Dec [illegible]	19th	Pos 1-1,280	
					1924			
50	W	F	[illegible]	Housewife	[illegible] 28	1[illegible]th	Pos 1-160	
51	W	M	15	[illegible] grocery	Aug 6	7th	Neg	
						14th	Pos 1-5,000	
52	W	M	45	Clerk [illegible] seed store	Aug [illegible]	[illegible]th	Pos 1-160	
53	W	M	54	Proprietor clothing store	Aug [illegible]			Contact with No. 52
57	W	M	44	Manager wholesale hardware store	Nov 9	6th	Pos 1-160	
58	W	F	38	Saleswoman, millinery store	Nov 16	5th	Neg	Guinea pigs positive
						17th	Neg	
59	W	F	11	Schoolgirl	Dec 6	[illegible]th	Pos 1-320	
60	W	F	26	Housewife	Dec [illegible]	8th	Neg	
					1925			
61	W	M	52	Proprietor furniture store	Mar 20	11th	Pos 1-320	
62	W	M	38	Sheriff	Feb 28	7th	Neg 1-20	
63	W	M	22	Clerk, drug store	Apr 19	11th	Pos 1-320	
64	W	F	21	Housewife	May 15	10th	Neg	Typical clinically
65	W	F	20	Cashier, moving-picture theater	June 13	8th	Neg 1-80	
66	W	M	25	Shoe salesman	July 7	10th	Neg	
67	W	M	37	Butcher, meat market	July 28	9th	Pos 1-320	
68	W	M	45	Probate judge	do	11th	Pos	
69	W	M	18	Physician	Aug. 8			
70	W	M	56	Proprietor furniture store	Aug. 12			
71	W	M	17	Clerk grocery store	Aug 13	12th	Pos 1-160	
72	W	M	18	Lawyer	Aug 17	7th	Neg	
						14th	Pos 1-320	
73	W	F	45	Clerk, department store	Aug 23	8th	Pos	
74	W	M	32	Manager wholesale flour store	Sept 12	14th	Pos 1-640	
75	W	F	17	Schoolgirl	Sept 17	7th	Pos 1-160	
76	W	F	30	Housewife	Sept 9	10th	Pos 1-640	
77	W	M	63	Railroad engineer	Sept 15	14th	Pos 1-640	Husband of No. 12
78	W	F	11	Schoolgirl	Sept 20	4th	Neg	
						10th	Pos 1-160	
79	W	M	22	Bank clerk	Sept 30	12th	Pos 1-1,280	
80	W	M	35	Taxi driver	Sept 27			
81	W	M	24	Produce salesman	Oct 19	9th	Pos 1-640	
82	Col	M	58	Employee of restaurant	Oct 30	3d	Neg	
						15th	Pos 1-1,280	
83	W	M	31	Proprietor wholesale flour and feed store	Nov. 4	9th	Pos 1-640	
84	W	F	5	Child	Dec 2	5th	Pos 1-100	

TABLE IV.—*Cases of Brill's disease occurring in Savannah, Ga., 1923–1925*

Case No.	Race	Sex	Age	Occupation	Date of onset	Weil-Felix day after onset	Reaction result	Remarks
					1923			
1	W	M	23	Employee of restaurant	July 13			
2	W	M	45	Dealer in hay and grain	July 14			
3	W	F	30	Housewife	July 16			
4	W	M	52	Employee of restaurant	July 19			
5	W	M	38	Watchman, Salvation Army Industrial Home	July 21			
6	W	F	19	Housewife	July 27			
7	W	M	31	Salesman, meat packer	July 28			
9	W	M	60	Salesman, ship chandler	Aug 3			
10	W	M	31	Salesman, tobacco warehouse	Aug 4			
11	W	M	52	Salesman, wholesale candy	Aug 6			
12	W	M	40	Tailor	Aug 14			
13	W	M	49	Grocer	Aug 16			
14	W	M	28	Butcher, store "H"	Aug 27			
17	Col	M	21	Dairy worker	Aug 29			
8	W	M	21	Unemployed	Aug 25			
16	W	F	51	Housewife	Sept 1			
17	W	M	37	Clerk wholesale warehouse	Sept 2			
18	W	M	30	Clerk, grocery store	Sept 17			
19	W	M	21	Employee, restaurant	Sept 23			
20	W	F	35	Housewife	Sept 24	7th	Pos 1-160	
21	W	M	28	Fire department employee	Sept 25	10th	Neg	
22	W	F	32	Housewife	Oct 1	11th	do	
23	W	F	25	do	Oct 2	8th	do	
24	W	M	30	Clerk grocery store	do	12th	Pos 1-160	
25	W	F	17	Unemployed	Oct 7	6th	Neg	
26	W	F	35	Housewife, boarding house	Oct 9			
27	W	F	14	Schoolgirl	Oct 15			
28	W	F	40	Clerk, grocery store	Oct 21	8th	Neg	
						17th	Pos 1-160	
28	Col.	M	38	Painter	Nov —			
29	W	M	38	Mechanic	Oct 21	14th	Pos 1-320	
29	W	F	38	Housewife	Oct 25	10th	Neg	
30	W	M	10	Child	do	do	Neg 1-80	Son of No. 29
31	W	F	5	do	do	do	Neg	Daughter of No. 29
32	W	M	32		Nov 2			Husband of No. 29
33	W	F	41	Housewife	Nov 8	15th	Pos 1-320	
34	W	F	26	do	Nov 11	12th	do	
37	W	F	43	do	Nov. 14	do	do	
40	W	M	52	Convict guard	Dec 10	9th	Neg	
						25th	Pos 1-320	
					1924			
1	W	F	51	Housewife	Mar 7	14th	Neg	Guinea pigs
2	W	F	40	do	May 1	8th	Neg 1-80	
3	W	M	44	Railroad engineer	May 12			
4	W	F	14	Schoolgirl	June 11			
5	W	M	35	Shipping agent	July 9	14th	Neg	
6	W	M	50	Foreman, railroad yards	Sept 1			
7	W	M	48	Turpentine broker	Sept 6			
8	W	F	57	Housewife	Sept 20			
9	W	F	19	Clerk, department store	do			
11	W	M	62	Farmer	Oct 21			
13	W	M	19	Barber	do	15th	Pos 1-60	
14	W	F	62	Housewife	Nov 25		Pos 1-160	
15	W	M	28	Employee, filling station	Nov 18	14th	do	
16	W	F	50	Housewife, living over store	Dec 18			
					1925			
17	W	F	18	Clerk, office	Jan 30			
18	W	M	36	Foreman, transfer company	Mar. 28			
19	W	F	48	Housewife	Apr. 4	10th	Neg 1-80	
						17th	Pos 1-1280	
20	W	M	34	Proprietor, furniture store	Apr 30	6th	Neg	
21	W	M	56	Proprietor, hotel and taxi service	Apr 18			
22	W	M	36	Superintendent, chemical works	May 16		Pos 1-320	
38b	W	M	65	Butcher, store "A"	Jan —			
23	W	F	35	Housewife, living next to bakery	May 7			
24	W	M	47	Mechanic	May 30			
25	W	F	52	Saleswoman, handicraft shop	July 9	16th	Pos 1-640	
26	W	M	23	Printer, shop on water front	July 15	10th	Pos. 1-100	
27	W	M	29	Salesman, feed store "S"	July 5			
28	W	M	17	Employee, "X" dairy	June 25	22d	Pos 1-320	
29	W	M	60	Farmer	July 22	10th	Neg 1-40	

Table IV.—*Cases of Brill's disease occurring in Savannah, Ga., 1923–1925*—Con.

Case No.	Race	Sex	Age	Occupation	Date of onset	Weil-Felix day after onset	Reaction result	Remarks
					1925			
30	W	F	30	Unemployed	July 28		Pos 1-160	
31	W	M	30	Clerk, grocery	do	14th	do	
32	W	M	25	Employee, "X" dairy	July 9	12th	Neg	
33	W	M	35	Employee, restaurant	Aug 11	15th	Pos 1-1280	
34	W	F	73	Housewife	Aug 15		Pos 1-320	
35	W	M	28	Clerk, feed store "S"	July 27	8th	Neg	
36	W	M	17	Employee, "X" dairy	Aug 19			
38	W	F	33	Telephone operator living over grocery store "A"	Aug 16			
39	W	M	34	Clerk, feed store "S"	Aug 7			
40	W	M	41	Carpenter	Aug 26			
41	W	F	19	Schoolgirl	do			
42	W	M	13	Schoolboy	Sept 17			
43	W	F	60	Housewife	Oct 1		Pos 1-160[1]	
44	W	M	19	Schoolboy	do	7th	do[1]	
45	W	M	27	Clerk, wholesale grocery	Oct 2	11th	do[1]	
46	W	M	22	Clerk, wholesale tobacco warehouse	Oct 5		Pos 1-320	
47	W	F	20	Clerk, grocery store	Oct 1	15th	do	
48	W	F	56	Housewife	Oct 11	17th	Neg	
50	W	F	7	School child	Oct 19	8th	Pos 1-160[1]	
51	W	M	70	Molder living on water front	Oct 16	20th	Pos 1-320	
52	W	M	50	Manager, ice plant	Nov 4	10th	Pos 1-320	
53	W	M	57	Engineer	Nov 9	5th	Pos 1-320	
54	W	F	30	Clerk, physician's office	Nov 7	10th	Pos 1-160[1]	
55	W	M	32	Merchandise broker	Nov 22	9th	Pos 1-640	
56	W	M	14	School child	Dec 13	8th	do	
57	W	M	26	Pipe fitter, railroad shop	Dec 14	6th	Pos 1-1280	
58	W	M	40	Painter	Dec 15		Pos 1-160	

[1] Microscopic agglutination with approximate dilution of dried blood.

Table V.—*Number of cases and case rate of endemic typhus according to broad occupational groups in Montgomery, Ala., 1922–1925*

[Population figures from U. S. census, 1920]

Group	Total persons in group		Number of cases in group		Case rate per 1,000 exposed	
	Male	Female	Male	Female	Male	Female
Population 10 years of age and over	16,428	19,498	29	14	1.77	0.72
All occupations	13,242	7,620	29	3	2.20	.39
Not gainfully employed	3,186	11,878	0	11	0	.93
Agriculture, forestry, and animal husbandry	215	26	0	0	0	0
Extraction of minerals	24	1	0	0	0	0
Manufacturing and mechanical industries	4,114	768	1	0	.250	0
Transportation	2,608	131	3	0	1.15	0
Trade	3,048	530	18	3	5.90	5.67
Public service	402	10	1	0	2.49	0
Professional service	650	571	3	0	4.62	0
Domestic and personal service	1,102	4,915	3	0	2.73	0
Clerical occupations	1,079	668	0	0	0	0

TABLE VI.—*Number of cases and case rate of endemic typhus according to broad occupational groups in Savannah, Ga., 1923–1925*

[Population figures from U. S. census, 1920]

Group	Total persons in group		Number of cases in group		Case rate per 1,000 exposed	
	Male	Female	Male	Female	Male	Female
Population 10 years of age and over	33,676	35,463	57	34	1.69	0.96
All occupations	28,986	12,880	52	7	1.79	.54
Not gainfully employed	4,690	22,583	5	27	1.07	1.19
Agriculture, forestry, and animal husbandry	273	24	6	0	21.98	0
Extraction of minerals	13	0	0	0	0	0
Manufacturing and mechanical industries	10,816	1,753	10	0	.92	0
Transportation	6,573	245	5	1	.76	4.08
Trade	4,810	878	23	4	4.78	4.56
Public service	940	9	2	0	2.13	0
Professional service	977	864	0	0	0	0
Domestic and personal service	1,800	7,710	6	0	3.33	0
Clerical occupations	2,784	1,397	0	2	0	1.43

References

ALLAN, WILLIAM

1923.—Endemic typhus fever in North Carolina. South. Med. & Surg., Charlotte, N. C., v. 85: 65–68.

ANDERSON, JOHN F., and GOLDBERGER, JOSEPH

1912. The relation of so-called Brill's disease to typhus fever. Pub. Health Rep., U. S. Pub. Health Serv., Wash., D. C., v. 27, no. 5: 149–160.

ARKWRIGHT, J. A.

1920. Remarks on the virus of typhus fever and the means by which it is conveyed. Proc. Roy. Soc. Med., Lond. Sect. Med., v. 13: 87–95.

ARMSTRONG, CHARLES

1922. Typhus fever on the San Juan Indian Reservation, 1920 and 1921. Pub. Health Rep., U. S. Pub. Health Serv., Wash. D. C., v. 37, no. 12: 685–693.

BOYD, M. F.

1917. Recent appearance of typhus fever in Iowa; a report. J. Iowa State Med. Soc., Des Moines, v. 7: 45–51.

BRILL, NATHAN E.

1898. A study of seventeen cases of a disease clinically resembling typhoid fever, but without the Widal reaction, etc. New York Med. J., v. 67: 48–54; 77–82.

1910. An acute infectious disease of unknown origin. A clinical study based on 221 cases. Am. J. Med. Sci., Phila. and N. Y., v. 139: 484–502.

1911. Pathological and experimental data derived from a further study of an acute infectious disease of unknown origin. Ibid., v. 142: 196–218.

1920. Typhus. Nelson Loose-Leaf Medicine, v. 1: 191–201.

COWDRY, E. V.

1925. Studies on the etiology of heartwater, I. Observation of a Rickettsia, *Rickettsia ruminantium* (n. sp.) in the tissues of infected animals. J. Exp. Med., Balt., v. 42: 231–252.

1925. Studies on the etiology of heartwater, II. *Rickettsia ruminantium* (n. sp.) in the tissues of ticks transmitting the disease. Ibid., v. 42: 253–274.

1926. Rickettsiae and disease. Arch. Path. & Lab. Med., Chicago, v. 2: 59–90.

CUMMING, JAMES G., and SENFTNER, H F.
1917. The prevention of endemic typhus in California J. Am. Med. Assoc, Chicago, v. 69. 98–102
FLETCHER, WILLIAM, and LESSLAR, J E
1925 Tropical typhus in the Federated Malay States. Bull. Inst Med. Res Fed Malay States, Kuala Lumpur, no 2 1–88.
HONE, F S.
1922 A series of cases resembling typhus fever Med J Australia, Sydney, v. 1: 1–13.
LEAGUE OF NATIONS
1925 Statistics of notifiable diseases for the year 1924. Epidemiological Intelligence No 9, Geneva, June: 31–33.
MAXCY, KENNETH F.
1926 Clinical observations on endemic typhus (Brill's disease) in Southern United States Pub Health Rep, U S Pub Health Serv, Wash D. C., v 41, no 25 1213–1220
MAXCY, KENNETH F, and HAVENS, LEON C.
1923 A series of cases giving a positive Weil-Felix reaction Am. J. Trop Med, Balt, v 3 495–507
NEWELL, L B, and ALLAN, WILLIAM
1914 Typhus fever A report of four cases South. Med J., Nashville v 7 564–568
NICOLLE, CHARLES.
1925 Les infections inapparentes à propos du typhus exanthematique inapparent Presse méd, Par, v 33 1169–1170
1926 Contribution nouvelle a la connaissance du typhus expérimental chez les meridés Arch de l Inst Pasteur de Tunis, v 15 267–275
NUTTALL, GEORGE H. F
1917. The biology of *Pediculus humanus.* Parasitology, Cambridge, Eng., v. 10 80–185. (See p. 109 for longevity)
PAULLIN, JAMES EDGAR.
1913 Typhus fever, with a report of cases South Med. J., Nashville, v. 6: 36–43.
PIERCE, C. C.
1917. Combating typhus fever on the Mexican border. Pub. Health Rep, U. S. Pub Health Serv, Wash, D. C., v. 32, no 12. 426–429.
SCHUFFNER, W., and WACHSMUTH, M.
1910 Ueber eine typhusartige Erkrankung. (Pseudotyphus von Deli.) Ztschr. f. klin., Med., Berl., v. 71: 133–156.
SYDENSTRICKER, V. P.
1926. Endemic typhus fever. (Abstract) J. Am. Med. Assoc., Chicago, v. 87: 124.
TAPPAN, J W.
1926. Protective health measures on the United States-Mexico border. J. Am. Med. Assoc., Chicago, v. 87. 1022–1025.
WALCH, EDUARD W., and KEUKENSCHRIJVER, NICOLAAS C
1925. Ueber die Epidemiologie des Pseudotyphus von Deli. Arch. f. Schiffs- u. Tropen-Hyg, Leipz., v. 29. 420–428.
WHEATLAND, F. T.
1926 A fever resembling a mild form of typhus fever. Med. J. Australia, Sydney, v. 1: 261–266.

CHANGES IN TYPE OF CONTAGIOUS DISEASES

The above was the title given by Dr Charles V. Chapin, superintendent of health, Providence, R I, to the fourth Sedgwick Memorial lecture Doctor Chapin's lecture was printed in full in the Journal of Preventive Medicine of September, 1926. Doctor Chapin discussed especially the changes in type of contagious diseases that have occurred in smallpox and scarlet fever This lecture might well be read with profit by every health officer and sanitarian. In order to invite attention to this lecture, the following quotations therefrom are repeated:

"Forms of life well adapted to their environment survive Those ill adapted perish. It is as true of smallpox and scarlet fever germs as it is of Norway rats, or the common daisy. Any quality tending to restrict the increase in numbers of these germs, or to restrict the opportunities for transference to another host, would seem to be hostile to the maintenance of the species A germ which promptly kills its host has little time for reproduction and little opportunity for transference. If the germ puts the host to bed, even if recovery ensues, it is also inimical to the dispersion of the germ, though, in a lesser degree. The discovery of bacteria came soon after the discovery of the action of natural selection, and many bacteriologists and epidemiologists were quick to see that natural selection is hostile to the virulence of the pathogens There are some who have doubted this and have claimed that the funeral of a dead man, and the constant calls of friends at the bedside of the sick man, favor the distribution of the infecting germs, but I doubt if there is a single practicing health officer who does not feel certain that there is far less chance of a person spreading disease germs if he is dead, or in bed, than if he is going about his daily work If the diphtheria bacillus invariably put its victim to bed, there would be a very good chance that we could control the disease The reason why the diphtheria bacillus is able to maintain itself so well is because it so frequently lives in the human throat without causing symptoms sufficient to come to the attention of the health officer.

"The mild type of smallpox has by no means driven out the classical form. In many places they have existed together. Although in the United States the mild type has been the prevailing one, there has been a very respectable amount of the classical form, and nowhere has the relationship of the two been more carefully studied Practically all American health officers who have had experience with the two types believe that they are distinct and breed true. A large proportion of the classical outbreaks have been traced to foreign lands. Many others, particularly in the Southwest, were so situated that importation from Mexico was probable.

"The most important question is, Does the mild type *ever* revert to the old classical form? Many have noted the occurrence of a severe and perhaps fatal case of smallpox clearly derived from the mild strain. Rarely a second or a third case develops. I know of no certain record of an outbreak of the classical form derived from the mild in the United States. The nearest approach to such a change in type is described by Doctor Davies, of Bristol, England. He records an outbreak in Wales of 15 cases, of which 4 were confluent, and 1 of which died, which was very clearly traced to a series of typically mild cases in Bristol.

"Just how thoroughly the mild strain has become established, it would, however, be unsafe at present to say.

"That vaccinia is derived from smallpox by animal passage we know That varicella is another offshoot from smallpox is highly probable That the mild type of smallpox sometimes called alastrim, or amaas, is another cleavage seems clear. That the two strains are closely related is shown by complement fixation tests, by animal inoculation, and by the immunity against both produced by vaccinia. Nevertheless the two types differ clinically in a marked degree and to some extent in immunity relations and in animal reactions.

"The history of the appearance and dispersion of the mild type of smallpox shows that it is not to be explained by changes in the host caused by vaccination, or otherwise It is not possible that it is due to climate or any telluric, or cosmic, or mystic epidemic influence. The theory that the disease is mild because the smallpox germ has parted company with a virulent streptococcus seems highly improbable. The simple and wholly adequate theory is that in Florida or in Africa the smallpox germ some thirty years ago suddenly underwent a change, or mutation, just as many other species of plants and animals, high and low, are constantly doing."

In speaking of scarlet fever, Doctor Chapin stated:

"It was a natural suggestion that the variation in virulence shown by scarlet fever might be explained in a similar way. I have, however, found little or nothing to support this view.

"Efforts to trace the spread of either mild or severe scarlet fever from country to country, or even from one city to another, have, with very few exceptions, proved unavailing. Doubtless too much importance ought not to be attached to this, for the tracing of scarlet fever is very much more difficult than the tracing of smallpox. There may well be considerable transference of scarlet fever from place to place without our being able to discover it.

"There are, however, other reasons than inability to trace dispersion, which render it improbable that the mild type of scarlet fever is, like smallpox, derived from a sudden mutation. In the first place there do not seem to be any clearly defined types of scarlet

fever, such as we see in smallpox. I have found no instance where one type of smallpox has slowly changed to another type, although there are instances where this has been simulated, as when a severe strain was imported into Detroit during an epidemic of the mild form. With scarlet fever it is very different. The loss of virulence has nowhere been sudden Wherever scarlet fever has been growing milder the change has been gradual; for the most part very gradual A slow process of evolution seems much more probable than a sudden mutation.

"The occasional appearance of increased virulence might simply mean the occasional natural variation, or reversion, to the ancestral severe strain.

"The facts here gathered indicate, with a considerable degree of probability, that the present mild character of scarlet fever is due to the selective force of isolation eliminating the severe strains It is far from a demonstration, but it is hoped that some one will give further study to the problem, for its solution seems to me to be a matter of very great moment."

DEATH RATES IN A GROUP OF INSURED PERSONS

Rates for Principal Causes of Death for October, 1926

The accompanying table is taken from the Statistical Bulletin for November, 1926, published by the Metropolitan Life Insurance Co , and presents the mortality experience of the industrial insurance department of the company for October, 1926, as compared with September, 1926, October, 1925, and the year 1925.

The bulletin says:

The health situation in the industrial populations of the United States and Canada showed improvement in October as compared both with the same month of 1925 and with the preceding month of 1926 The recorded death rate (7.9 per 1,000) shares with October, 1921 and 1922, the distinction of being the lowest ever recorded for October In 1925 the rate was 8 1; in 1924, 8 5; and in 1923, 8 8.

At this season of the year special interest always attaches to what is happening with respect to influenza and the respiratory diseases This interest is somewhat accentuated at present by reports from different sections of the country which show, beyond question, that cases of influenza are increasing. Obviously, there is much concern as to the extent that this increased sickness is being reflected in the death rate. We are able to report that up to November 13 the records of the industrial department of the Metropolitan show nothing more than the expected seasonal rise in the death rate from influenza and pneumonia. Among more than 17,000,000 persons exposed to risk there were recorded, in October, 105 deaths from influenza and 740 from pneumonia. The death rate in October for these two diseases combined was 55.6 per 100,000. This actually shows improvement over October of last year, when the rate was 60.1. Furthermore, in both the first and second weeks of November the combined mortality from influenza and pneumonia was lower than in the corresponding weeks of 1925,

at a time when no particular anxiety was being manifested about any impending outbreak of influenza Current low rates for heart disease, Bright's disease, and cerebral hemorrhage also indicate that the kind of influenza now prevailing is not the virulent type

The mortality from each of the principal epidemic diseases of childhood is low, although the diphtheria death rate rose rather sharply from 6 5 per 100,000 in September to 10 5 in October, in October a year ago it was 9 7 Tuberculosis, diarrheal diseases, and puerperal conditions show improvement over October, 1925.

In the field of deaths due to violence, suicides continue to be reported in unusual numbers, and if there is no slackening during November and December in the suicide rate the figure recorded for the year 1926 will be higher than for any year since 1921, it may even exceed the rate for that year, in which event it will be the highest recorded since 1917 The homicide rate, in October, was a little lower than in September, and in October, 1925 Automobile fatalities were fewer than in October, 1925

Death rates (annual basis) for principal causes per 100,000 lives exposed, September and October, 1926, October, 1925, and year 1925

[Industrial department, Metropolitan Life Insurance Co]

Causes of death	Rate per 100,000 lives exposed [1]			
	October, 1926	September, 1926	October, 1925	Year 1925
Total, all causes	785 8	814 2	813 3	907.5
Typhoid fever	6 2	8 4	7.1	4 6
Measles	1 3	1 9	8	3 3
Scarlet fever	2 0	1 1	2 1	3 5
Whooping cough	6 1	9 0	7 2	7 7
Diphtheria	10 5	6 5	9 7	10 6
Influenza	6 9	4 6	6.7	22 0
Tuberculosis (all forms)	78 1	89 6	82 6	98.1
Tuberculosis of respiratory system	68.9	79 1	72 5	85.9
Cancer	69 7	72 8	66 0	70 5
Diabetes mellitus	13 9	15.1	14 0	15.2
Cerebral hemorrhage	46.4	46 1	44 0	53.6
Organic diseases of heart	106 7	105.1	105.8	126.6
Pneumonia (all forms)	48 7	36 3	53 4	86 5
Other respiratory diseases	11.0	9 0	10 3	13 2
Diarrhea and enteritis	49 3	63 6	61.9	36 7
Bright's disease (chronic nephritis)	62 0	60 4	62 8	69.8
Puerperal state	11 8	11 5	12 6	16.5
Suicides	7 9	9 0	6.9	6.9
Homicides	6 3	6.5	6 8	7.2
Other external causes (excluding suicides and homicides)	58.0	68 5	64 7	64 3
Traumatism by automobiles	19 5	20 5	21 2	16.6
All other causes	183 0	189 1	187.8	190.7

[1] All figures include infants insured under one year of age

PUBLIC HEALTH ENGINEERING ABSTRACTS

A Note on the Rearing of Anopheline Larvæ. Mark F. Boyd. *Bulletin of Entomological Research*, vol. 16, part 4, March, 1926, p. 308. (Abstract by L. D. Fricks.)

This article describes a successful method of rearing adult Anopheles from eggs deposited by captive females. The author states that the chief difficulty in rearing Anopheles in the laboratory arises from a lack of vitamines in their algæ food. He overcomes this

difficulty by feeding Fleischmann's Yeast and by this method of feeding attained a high degree of success, 100 per cent development from eggs to adults in 13 days

A small amount of yeast was daily rubbed into the superficial layer of water in the culture pans Marble dust was kept in the pans to conserve alkalinity, and the water was changed frequently.

The Mosquitoes of the Lower Fraser Valley, British Columbia, and their Control. Eric Hearle, B Sc. Report No 17, Canadian National Research Council, Ottawa, 1926 91 pages. (Abstract by W. H W. Komp)

A very complete study of the mosquitoes of the region, with keys to the species found, illustrations of the most common species, observations on the breeding habits, and excellent photographs of typical breeding places, including some fine airplane views. The lower Fraser Valley is the richest agricultural area in British Columbia, small-fruit growing, livestock breeding and dairying, and lumbering being the principal industries The lower valley is flat, interlaced with numerous slow, winding creeks and sloughs During the greater part of the year the river is at low stage, but during the late spring and early summer freshets from melting snow flood the lowlands, causing extensive temporary swamps. These give rise to a mosquito pest that seriously interferes with the proper development of the country. At high water about 14,000 acres are affected. The report recommends as a temporary measure the use of oil and of oil-soaked sawdust for small areas, and the diking and draining of the larger areas. Stress is laid on the necessity for cooperation among the various political divisions in financing these projects. Evidence of the migration of mosquitoes for 10 to 15 miles from their breeding grounds has been found; these nullify the best-intentioned local operations, and make it imperative that some central board direct the mosquito-control measures.

The Effect of Turbulent Air Motion and of Humidity on the Stability of Dust, Fumes, and Smoke Clouds. Philip Drinker, R. M. Thomson, and Jane L. Finn *The Journal of Industrial Hygiene,* vol. 8, No 7, July, 1926, pp. 307–313. (Abstract by Leonard Greenburg.)

In this very interesting contribution Mr. Drinker and his associates report on a series of studies made in the gassing chamber at the Harvard School of Public Health. In these studies suspensions of dusts of various kinds (silica, zinc oxide, and tobacco smoke) were set up and the rate of sedimentation curve was determined by means of a Tyndall meter attached to one side of the chamber. The influence of air motion was found by determining the change in the sedimentation curve affected by the use of electric fans, and the effect of moisture was found by the changes produced in the shape of the

curve when steam was blown into the chamber. In some cases the humidity of the cabinet was raised to the saturation point by blowing steam into the chamber, then slowly allowing the saturation to fall to 95 per cent prior to the introduction of the dust

As a result of these studies turbulent air motion was found to have no effect on the subsidence of silica dust but a marked effect on zinc oxide and a considerable effect on tobacco smoke Local humidification has a marked effect on silica dust and on zinc oxide. General humidification of the cabinet failed to affect the settling rate of silica dust and tobacco smoke but hastened the settlement of zinc oxide both as a powder and as a fume.

How to Get a Smokeless Atmosphere and Make it Pay. Councillor W Brownhill Smith *The Journal of State Medicine,* vol 34, No 7, July, 1926, pp 422–427 (Abstract by Leonard Greenburg)

In this paper the author points out that smoke exerts a harmful effect on health either directly by affecting the organs of respiration or indirectly by cutting down the normal quantity of sunshine which is now known to be so essential to health According to the 1920 Report of the Departmental Committee on Smoke and Noxious Vapors Abatement, "the number of deaths from pulmonary and cardiac diseases is shown to increase in direct proportion to an increase in the intensity and duration of smoke fogs" In the cities of Great Britain particularly, and to a large extent in the rural districts, the effect of fog is generally admitted to be a pernicious one.

The fog of the cities of Great Britain is in a large measure due to the use of coal in individual grates for heating purposes, central heating being employed only to a very minor degree.

The duty of the medical men is to preach against the evils of the smoke-laden atmosphere, according to the author of this paper.

The use of gas affords a method of heating and cooking which is free of smoke production, and in those areas of the country where gas is relatively cheap this method should find wide favor And according to the author, Prof. Parker Smith, of Glasgow, has shown that in certain large towns where electricity is supplied at a low price it is cheaper to heat cottages and villas by this means than with coal. But for the majority of towns (where these conditions do not obtain) it is necessary to resort to other means in order to keep the atmosphere smoke free. This can only be done by the provision of a smokeless fuel that can not burn in the types of grates and cookers now in use.

The writer then reviews the steps taken by the Glasgow Gas Committee in its search for a fuel which would burn satisfactorily in ordinary domestic grates.

Experimentally, small-size plants and finally large-size plants were constructed, using the process of Robert Maclaurin for coal carboni-

zation, all of which have come to a very satisfactory termination The carbonized fuel known as "Kincole" has 45 per cent more heating power than an equal weight of raw coal and burns smokelessly in the ordinary domestic grate. By this method a highly satisfactory smokeless fuel is obtained and the cost of gas manufacture is at the same time lowered The author urges the use of this smokeless fuel.

Do Water Supplies Disfigure Teeth of Children? (Comments in response to an article entitled "Water Supplies Charged with Disfiguring Teeth" which appeared in *Water Works Engineering* January 15, 1926). *Water Works Engineering*, vol. 79, No. 15, August 1, 1926, p. 995. (Abstract by Frank Raab.)

Richard Messer, Richmond, Va., quoted several dentists, some of whom blame the trouble of mottled enamel to water. Another, who is himself affected, does not blame it to the water According to Doctor McKay, there are two localities on the Atlantic seaboard where the trouble of mottled enamel appears, and in each case it is blamed to artesian water.

M. H McCrady, of Montreal, Canada, writes that the trouble of mottled enamel is new in his experience, but admits that it might exist in some parts of the country, H. E Moses, Harrisburg, Pa., believes that the above trouble is found very rarely in Pennsylvania. He offers no suggestion as to the cause

Raising the Standard of Water Supplies. A. L Dopmeyer, Associate Sanitary Engineer, United States Public Health Service. Proceedings of Eighth Texas Water Works Short School, January 18–23, 1926, pp. 18–22. (Abstract by V. M. Ellers)

In this paper a plea is made for a sanitary engineering organization representing the State, with adequate personnel and appropriations to give the advice and assistance to communities on sanitary engineering problems, which they need and have a right to expect.

Many communities which do not as yet realize the value of a water supply of high sanitary quality should be properly educated by engineers representing the State, according to the author, and the raising of the general standard of water supplies in the State is said to be dependent on such education.

The routine activities recommended by the Conference of State Sanitary Engineers for effective control of water supplies by State health departments are set forth as an indication of the magnitude of the work involved in this task alone, which is but one of the manifold duties a State sanitary engineer is expected to perform.

The development of State supervision and control over water supplies is also briefly outlined in this paper, depicting the active part which the United States Public Health Service has played in organizing and developing State sanitary engineering divisions.

Some Aspects of the Housing Problem. C A Clews *Journal of the Royal Sanitary Institute*, Vol 46, No 12, May, 1926, pp 581–583. (Abstract by R E Tarbett)

This article covers the problem of providing housing accommodations in Derby since the war Under the 1919 act the corporation built 724 houses at a cost of 20s 6d. to 22s 8d per super foot for the parlor type, and 18s 2d to 20s for the nonparlor type Construction material is not given

Under the 1923–24 act the corporation is building 1,850 houses. Brickwork was found to be the cheapest form of construction. The cost of these houses of the nonparlor type with three bedrooms is £461 10s or 11s 3d and of the same type with two bedrooms £339 or 10s per super foot of floor space, exclusive of land and street works. The parlor type with three bedrooms cost £530 or 11s 2d. The greater part of the houses are semidetached and built with a density of 12 per acre.

As building was not progressing rapidly enough, it was decided to erect 250 cast-iron houses These houses cost about the same as the other type but could be quickly erected and would not draw on the skilled labor already employed A detailed description of these houses is given These houses appear comparable with the small five-room house in the United States, having two floors with three bedrooms and bath on the upper floor The foundations are of concrete carried 6 inches above ground. The outer walls are of cast plates 3 feet square and 3/8 inch thick with flanges 2⅝ inches wide. The plates are covered with special cement and the flanges are slightly recessed to allow for a nailing strip. Studding 2 by 3 inches is used, and walls are lined with asbestos sheeting. Roof is of timber, covered with tile; windows and door casings of wood; floor of living and bedrooms of wood and of other rooms concrete. Houses are equipped with grate and back boiler, hot and cold water, and electricity. A few other types of houses have been built. Rent for the nonparlor, three-bedroom type of house is 12s 3d. per week, and for the two-bedroom 10s per week.

The writer concludes that in view of the still serious shortage the aim should be to construct as cheaply as possible, without sacrifice of health or durability, a type which may be erected quickly and the rental of which would come within reach of the ordinary artisan, say not more than one-sixth of his income.

Automobiles and Public Health. W. J McConnell, Medical Secretary, Philadelphia Health Council and Tuberculosis Committee. *American Public Health Journal*, vol. 16, No. 9, September, 1926, pp. 884–886. (Abstract by H. N. Old.)

There is mentioned in this article the possible factor of accidents and the industrial hazard in the manufacture and addition of certain compounds tending to increase the efficiency of motor fuels, but the greater part is devoted to the hazard of carbon-monoxide poisoning resulting from combustion of the fuels.

The danger by reason of a running motor in a closed or a poorly ventilated inclosure is referred to at some length, but more space is devoted to the subject of excessive concentration of CO in the atmosphere of localities where motor-car traffic is heavy or in tunnels and similar covered passageways subjected to exhaust gas, 7 per cent of which is said to be carbon monoxide, while an atmosphere containing 1 per cent is known to be sufficient to cause death in a very short time.

Reference is made to the research work in connection with the Hudson tubes, which lead to a permissible maximum CO concentration of 4 parts per 10,000 for a period of an hour, determinations being on basis of physiological tests. It is stated that other workers have found frequently 0.01 per cent in the atmosphere of parts of Fifth Avenue, New York City, and state that 0.02 per cent and even more was not unusual in limited areas and for short periods. This concentration is not considered serious.

Brief reference is also made to some of the symptoms of carbon-monoxide poisoning and to emergency treatment. Methods and apparatus for CO determinations are discussed very briefly, but a list of related publications for reference purposes is included.

DEATHS DURING WEEK ENDED DECEMBER 11, 1926

Summary of information received by telegraph from industrial insurance companies for week ended December 11, 1926, and corresponding week of 1925 (From the Weekly Health Index, December 16, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Dec 11, 1926	Corresponding week, 1925
Policies in force	66,332,374	62,333,156
Number of death claims	12,486	12,102
Death claims per 1,000 policies in force, annual rate	9.8	10.1

Deaths from all causes in certain large cities of the United States during the week ended December 11, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, December 16, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Dec 11, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Dec 11, 1926 [2]
	Total deaths	Death rate [1]		Week ended Dec 11, 1926	Corresponding week, 1925	
Total (66 cities)	7,106	12.8	12.8	721	722	62
Akron	32			4	9	43
Albany [4]	34	14.9	15.9	4	5	83
Atlanta	65			9	7	
White	34			5	2	
Colored	31	(5)		4	5	
Baltimore [4]	216	13.9	13.8	18	22	55
White	172			10	17	38
Colored	44	(5)		8	5	127
Birmingham	52	12.9	17.5	4	6	
White	18			2	3	
Colored	34	(5)		2	3	
Boston	226	15.0	14.9	31	30	87
Bridgeport	29			4	3	68
Buffalo	119	11.4	14.1	12	20	50
Cambridge	26	11.1	9.2	3	0	53
Camden	34	13.5	18.2	5	8	84
Canton	13	6.2	15.2	0	4	0
Chicago [4]	657	11.2	11.2	69	62	60
Cincinnati	152	19.3	18.6	15	12	94
Cleveland	180	9.8	10.9	19	25	49
Columbus	82	15.0	14.9	8	7	75
Dallas	43	11.0	11.8	7	6	
White	29			5	6	
Colored	14	(5)		2	0	
Dayton	36	10.6	13.9	4	5	66
Denver	83	15.2	14.8	7	6	
Des Moines	30	10.7	11.1	2	[illegible]	33
Detroit	290	11.7	10.9	38	40	62
Duluth	21	9.7	9.4	1	1	23
El Paso	27	12.9	17.4	4	6	
Fall River [4]	26	10.3	10.5	4	3	63
Flint	30	11.5	6.4	4	1	68
Fort Worth	33	10.8	8.1	1	3	
White	25			1	3	
Colored	8	(5)		0	0	
Grand Rapids	42	14.0	11.2	6	5	86
Houston	63			4	4	
White	45			4	4	
Colored	18	(5)		0	0	
Indianapolis	107	15.2	13.5	8	7	61
White	96			8		70
Colored	11	(5)		0		0

[1] Annual rate per 1,000 population

[2] Deaths under 1 year per 1,000 births. Cities left blank are not in registration area for births.

[3] Data for 63 cities.

[4] Deaths for week ended Friday, Dec. 10, 1926.

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25, Indianapolis, 11; Kansas City, Kans., 14; Louisville, 17, Memphis, 38; New Orleans, 26; Norfolk, 38, Richmond, 32, and Washington, D. C., 25.

Deaths from all causes in certain large cities of the United States during the week ended December 11, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925—Continued

City	Week ended Dec 11, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Dec. 11, 1926
	Total deaths	Death rate		Week ended Dec 11, 1926	Corresponding week, 1925	
Jersey City	69	11.3	13.1	6	4	45
Kansas City, Kans	26	11.6	10.8	4	6	78
White	20			3	5	67
Colored	6	(5)		1	1	152
Kansas City, Mo	97	13.5	13.9	9	14	
Los Angeles	257			22	13	61
Louisville	92	15.4	11.6	4	5	34
White	69			3	5	29
Colored	23	(5)		1	0	70
Lowell	22			7	6	135
Lynn	27	13.5	12.6	4	6	105
Memphis	53	15.6	20.3	4	8	
White	26			3	5	
Colored	27	(5)		1	3	
Milwaukee	121	12.2	11.2	16	17	75
Minneapolis	99	11.9	10.7	10	8	55
Nashville	42	16.0	19.2	5	4	
New Bedford	27			5	7	87
New Haven	37	10.6	13.7	4	2	55
New Orleans	119	14.8	10.0	11	16	
White	66			6	7	
Colored	53	(5)		5	9	
New York	1,484	13.1	11.4	127	116	52
Bronx Borough	167	9.7	9.0	14	12	47
Brooklyn Borough	491	11.4	9.1	39	35	40
Manhattan Borough	650	18.1	15.8	56	59	62
Queens Borough	129	8.8	8.2	16	8	73
Richmond Borough	47	18.1	17.1	2	2	35
Newark, N. J	106	12.0	13.0	13	7	62
Norfolk	41	12.3	11.7	5	9	101
White	22			2	5	65
Colored	19	(5)		3	4	159
Oakland	61	12.2	11.1	9	4	104
Oklahoma City	27			3	1	
Omaha	49	11.8	12.8	3	4	32
Paterson	31	11.3	15.1	5	6	84
Philadelphia	521	13.5	13.4	62	59	83
Pittsburgh	148	12.1	15.0	25	16	83
Portland, Oreg	87			6	3	60
Providence	57	10.8	13.2	12	6	100
Richmond	58	16.0	13.2	6	6	75
White	31			3	3	58
Colored	27	(5)		3	3	104
Rochester	96	15.6	12.5	9	5	71
St Louis	237	14.0	13.7	17	7	
St Paul	54	11.4	13.8	5	3	44
Salt Lake City [4]	34	13.3	7.2	[illegible]	3	91
San Antonio	55	14.0	19.0	7	12	
San Diego	27	12.8	10.3	3	1	64
San Francisco	136	14.3	16.5	7	10	42
Schenectady	23	12.9	13.5	1	4	29
Seattle	65			7	9	67
Somerville	22	11.5	11.1	2	3	57
Spokane	26	12.4	10.5	4	3	93
Springfield, Mass	22	7.9	11.7	3	5	46
Syracuse	44	12.4	10.0	4	5	51
Tacoma	27	13.3	10.5	2	0	47
Toledo	65	11.5	12.4	7	10	67
Trenton	35	13.6	15.8	4	6	68
Utica	37	18.7	14.9	1	2	23
Washington, D C	136	13.4	14.7	15	10	86
White	84			12	7	100
Colored	52	(5)		3	3	55
Waterbury	18			1	5	24
Wilmington, Del	30	12.6	15.4	0	5	0
Worcester	42	11.3	13.9	4	8	48
Yonkers	11	4.9	11.5	0	5	0
Youngstown	30	9.5	13.0	2	6	25

[4] Deaths for week ended Friday, Dec 10, 1926.

[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans , 14; Louisville, 17; Memphis, 38; New Orleans, 26; Norfolk, 38; Richmond, 32, and Washington, D. C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended December 18, 1926

ALABAMA

	Cases
Cerebrospinal meningitis	2
Chicken pox	35
Diphtheria	49
Influenza	49
Malaria	13
Measles	8
Mumps	6
Ophthalmia neonatorum	1
Pellagra	5
Pneumonia	56
Scarlet fever	25
Smallpox	17
Tuberculosis	23
Typhoid fever	22
Typhus fever	6
Whooping cough	24

ARIZONA

	Cases
Cerebrospinal meningitis	1
Chicken pox	6
Diphtheria	7
Measles	16
Mumps	1
Pneumonia	1
Scarlet fever	6
Tuberculosis	22
Typhoid fever	1

ARKANSAS

	Cases
Chicken pox	30
Diphtheria	13
Hookworm disease	1
Influenza	87
Malaria	18
Measles	2
Mumps	11
Pellagra	5
Scarlet fever	19
Smallpox	3
Tuberculosis	7
Typhoid fever	12
Whooping cough	26

CALIFORNIA

	Cases
Cerebrospinal meningitis—Los Angeles	1
Chicken pox	250
Diphtheria	163
Influenza	25
Leprosy—Los Angeles	1
Measles	824
Mumps	128
Poliomyelitis	
Long Beach	1
Los Angeles	1
San Joaquin County	1
Scarlet fever	262
Smallpox	4
Tuberculosis	140
Typhoid fever	13
Whooping cough	40

COLORADO

	Cases
Cerebrospinal meningitis	1
Chicken pox	38
Diphtheria	21
German measles	2
Influenza	2
Measles	28
Mumps	6
Pneumonia	4
Scabies	1
Scarlet fever	110
Smallpox	13
Tuberculosis	9
Typhoid fever	1
Whooping cough	2

CONNECTICUT

	Cases
Cerebrospinal meningitis	2
Chicken pox	153
Diphtheria	28
Influenza	17
Measles	67
Mumps	18
Pneumonia (broncho)	28
Pneumonia (lobar)	37

CONNECTICUT—continued

	Cases
Poliomyelitis	1
Scarlet fever	77
Septic sore throat	3
Tuberculosis (all forms)	24
Typhoid fever	1
Whooping cough	35

DELAWARE

Chicken pox	1
Diphtheria	2
Pneumonia	5
Scarlet fever	15
Tuberculosis	2
Whooping cough	1

FLORIDA

Chicken pox	14
Diphtheria	42
Influenza	1
Malaria	9
Measles	9
Pneumonia	3
Scarlet fever	13
Smallpox	49
Tetanus	1
Tuberculosis	6
Typhoid fever	10
Whooping cough	4

GEORGIA

Chicken pox	29
Diphtheria	31
Dysentery	3
Hookworm disease	6
Influenza	61
Malaria	12
Measles	21
Mumps	8
Pneumonia	24
Scarlet fever	20
Septic sore throat	4
Smallpox	61
Tetanus	1
Tuberculosis	14
Typhoid fever	7
Typhus fever	2
Whooping cough	32

IDAHO

Cerebrospinal meningitis.	
St. Maries	1
Winchester	1
Chicken pox	8
Diphtheria	1
Measles	35
Mumps	1
Pneumonia	1
Poliomyelitis—Mountain Home	1
Scarlet fever	41
Streptococcic sore throat	1
Tuberculosis	3
Whooping cough	1

ILLINOIS

	Cases
Cerebrospinal meningitis	
Madison County	1
Peoria County	1
Chicken pox	463
Diphtheria	115
Influenza	22
Lethargic encephalitis	
Cook County	1
Fayette County	1
Macoupin County	1
Measles	625
Mumps	130
Pneumonia	285
Scarlet fever	323
Smallpox	9
Tuberculosis	248
Typhoid fever	19
Whooping cough	181

INDIANA

Chicken pox	195
Diphtheria	67
Influenza	60
Measles	48
Pneumonia	10
Poliomyelitis	1
Scarlet fever	186
Smallpox	176
Tuberculosis	35
Typhoid fever	7
Whooping cough	102

IOWA

Chicken pox	81
Diphtheria	26
Measles	48
Mumps	7
Pneumonia	1
Scarlet fever	64
Smallpox	11
Tuberculosis	11
Whooping cough	5

KANSAS

Cerebrospinal meningitis:	
Easton	1
Manhattan	1
Chicken pox	157
Diphtheria	13
German measles	4
Influenza	6
Lethargic encephalitis	1
Measles	67
Mumps	1
Pneumonia	40
Scarlet fever	79
Smallpox	
Topeka	14
Scattering	11
Tuberculosis	84
Typhoid fever	5
Whooping cough	52

LOUISIANA

	Cases
Diphtheria	25
Influenza	13
Malaria	11
Pneumonia	36
Scarlet fever	31
Smallpox	1
Tuberculosis	48
Typhoid fever	13

MAINE

	Cases
Chicken pox	93
Diphtheria	5
German measles	4
Influenza	3
Measles	193
Mumps	5
Pneumonia	21
Scarlet fever	47
Tuberculosis	5
Typhoid fever	3
Vincent's angina	4
Whooping cough	53

MARYLAND [1]

	Cases
Cerebrospinal meningitis	1
Chicken pox	155
Diphtheria	58
German measles	1
Influenza	25
Measles	22
Mumps	27
Ophthalmia neonatorum	1
Pneumonia (broncho)	23
Pneumonia (lobar)	33
Poliomyelitis	1
Scarlet fever	61
Septic sore throat	5
Tetanus	1
Tuberculosis	40
Typhoid fever	13
Whooping cough	109

MASSACHUSETTS

	Cases
Anthrax	2
Cerebrospinal meningitis	2
Chicken pox	391
Conjunctivitis (suppurative)	3
Diphtheria	108
German measles	13
Influenza	8
Measles	88
Mumps	165
Ophthalmia neonatorum	17
Pneumonia (lobar)	91
Poliomyelitis	4
Scarlet fever	327
Septic sore throat	3
Tuberculosis (pulmonary)	111
Tuberculosis (other forms)	18
Typhoid fever	35
Whooping cough	142

MICHIGAN

	Cases
Diphtheria	143
Measles	114

[1] Week ended Friday.

MICHIGAN—continued

	Cases
Pneumonia	158
Scarlet fever	310
Smallpox	13
Tuberculosis	22
Typhoid fever	8
Whooping cough	90

MINNESOTA

	Cases
Chicken pox	311
Diphtheria	33
Dysentery	2
Influenza	1
Measles	151
Pneumonia	2
Scarlet fever	247
Smallpox	4
Tuberculosis	40
Typhoid fever	2
Whooping cough	16

MISSISSIPPI

	Cases
Diphtheria	22
Scarlet fever	29
Smallpox	6
Typhoid fever	5

MISSOURI

(Exclusive of Kansas City)

	Cases
Cerebrospinal meningitis	1
Chicken pox	54
Diphtheria	63
Epidemic sore throat	6
Influenza	22
Measles	113
Ophthalmia neonatorum	1
Scarlet fever	102
Trachoma	1
Tuberculosis	30
Typhoid fever	17
Whooping cough	44

MONTANA

	Cases
Chicken pox	13
Diphtheria	7
Measles	265
Mumps	2
Scarlet fever	53
Smallpox	55
Tuberculosis	1
Typhoid fever	3
Whooping cough	9

NEBRASKA

	Cases
Chicken pox	28
Diphtheria	7
German measles	8
Measles	8
Mumps	8
Pneumonia	2
Poliomyelitis	1
Scarlet fever	47
Smallpox	13
Tuberculosis	2
Typhoid fever	5
Whooping cough	4

NEW JERSEY

	Cases
Cerebrospinal meningitis	3
Chicken pox	286
Diphtheria	117
Influenza	25
Measles	30
Paratyphoid fever	1
Pneumonia	152
Rabies	1
Scarlet fever	150
Typhoid fever	10
Whooping cough	187

NEW MEXICO

	Cases
Chicken pox	19
Conjunctivitis	1
Diphtheria	7
Dysentery	4
German measles	5
Measles	21
Mumps	6
Pneumonia	7
Scarlet fever	37
Tuberculosis	22
Typhoid fever	4
Whooping cough	5

NEW YORK

(Exclusive of New York City)

	Cases
Cerebrospinal meningitis	4
Chicken pox	512
Diphtheria	100
German measles	99
Influenza	7
Measles	917
Mumps	177
Pneumonia	249
Poliomyelitis	4
Scarlet fever	202
Septic sore throat	1
Smallpox	14
Typhoid fever	33
Vincent's angina	6
Whooping cough	256

NORTH CAROLINA

	Cases
Chicken pox	146
Diphtheria	79
German measles	3
Malaria	1
Measles	91
Scarlet fever	51
Septic sore throat	1
Small pox	73
Typhoid fever	6
Whooping cough	283

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

	Cases
Cerebrospinal meningitis:	
Caddo County	1
McClain County	1
Chicken pox	25
Diphtheria	23
Influenza	106

[2] Deaths.

OKLAHOMA—continued

	Cases
Malaria	8
Measles	34
Pneumonia	59
Poliomyelitis—Cherokee County	1
Scarlet fever	25
Smallpox	
McCurtain County	10
Scattering	6
Typhoid fever	16
Whooping cough	24

OREGON

	Cases
Botulism	1
Cerebrospinal meningitis	1
Chicken pox	30
Diphtheria	35
Influenza	22
Lethargic encephalitis	1
Measles	41
Mumps	9
Pneumonia	[2] 10
Puerperal septicemia	1
Scarlet fever	46
Septic sore throat	3
Smallpox	18
Typhoid fever	3
Whooping cough	5

PENNSYLVANIA

	Cases
Anthrax—Philadelphia	1
Cerebrospinal meningitis	1
Chicken pox	731
Diphtheria	160
German measles	12
Impetigo contagiosa	13
Measles	573
Mumps	90
Ophthalmia neonatorum	
Mifflin County	1
Philadelphia	5
Pneumonia	26
Poliomyelitis—Armstrong County	1
Scabies	14
Scarlet fever	411
Trachoma—Philadelphia	1
Tuberculosis	93
Typhoid fever	23
Whooping cough	272

RHODE ISLAND

	Cases
Chicken pox	6
Diphtheria	8
Measles	1
Mumps	1
Pneumonia	1
Scarlet fever	13
Tuberculosis	4
Whooping cough	7

SOUTH CAROLINA

	Cases
Chicken pox	51
Diphtheria	33
Hookworm disease	21
Influenza	544

SOUTH CAROLINA—continued

	Cases
Malaria	139
Measles	3
Pellagra	16
Poliomyelitis	1
Scarlet fever	11
Smallpox	7
Tuberculosis	27
Typhoid fever	16
Whooping cough	13

SOUTH DAKOTA

Cerebrospinal meningitis	2
Chicken pox	29
Diphtheria	1
Measles	61
Pneumonia	5
Scarlet fever	41
Smallpox	5
Typhoid fever	2
Whooping cough	11

TENNESSEE

Chicken pox	61
Diphtheria	24
Influenza	55
Malaria	7
Measles	26
Ophthalmia neonatorum	1
Pellagra	2
Pneumonia	34
Scarlet fever	31
Smallpox	16
Trachoma	1
Tuberculosis	9
Typhoid fever	24
Whooping cough	65

TEXAS

Chicken pox	20
Diphtheria	45
Influenza	269
Mumps	11
Pellagra	3
Pneumonia	15
Scarlet fever	29
Smallpox	24
Trachoma	2
Tuberculosis	6
Typhoid fever	4
Whooping cough	18

UTAH

Chicken pox	43
Diphtheria	5
Measles	303
Mumps	26
Pneumonia	13
Scarlet fever	17
Tuberculosis	1
Typhoid fever	1
Whooping cough	1

VERMONT

	Cases
Chicken pox	53
Measles	111
Mumps	20
Scarlet fever	15
Typhoid fever	1
Whooping cough	31

WASHINGTON

Cerebrospinal meningitis	1
Chicken pox	143
Diphtheria	33
German measles	37
Measles	117
Mumps	35
Scarlet fever	82
Smallpox	24
Tuberculosis	22
Typhoid fever	3
Whooping cough	2

WEST VIRGINIA

Chicken pox	169
Diphtheria	55
Influenza	59
Measles	75
Scarlet fever	73
Smallpox	6
Tuberculosis	15
Typhoid fever	9
Whooping cough	54

WISCONSIN

Milwaukee	
Cerebrospinal meningitis	2
Chicken pox	91
Diphtheria	15
German measles	4
Influenza	1
Measles	32
Mumps	27
Pneumonia	18
Scarlet fever	13
Tuberculosis	15
Typhoid fever	1
Whooping cough	54
Scattering	
Cerebrospinal meningitis	1
Chicken pox	283
Diphtheria	21
German measles	25
Influenza	56
Lethargic encephalitis	1
Measles	406
Mumps	66
Ophthalmia neonatorum	1
Pneumonia	19
Scarlet fever	100
Smallpox	13
Tuberculosis	24
Whooping cough	114

WYOMING

Chicken pox	19
Diphtheria	6
Measles	28
Pneumonia	3
Scarlet fever	29
Typhoid fever	2
Whooping cough	4

Reports for Week Ended December 11, 1926

DISTRICT OF COLUMBIA

	Cases
Chicken pox	52
Diphtheria	23
Pneumonia	25
Scarlet fever	8
Tuberculosis	20
Typhoid fever	1
Whooping cough	8

NORTH DAKOTA

	Cases
Chicken pox	25

NORTH DAKOTA—continued

	Cases
Diphtheria	5
German measles	4
Measles	181
Pneumonia	7
Scarlet fever	35
Smallpox	28
Tuberculosis	1
Whooping cough	6

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
October, 1926										
Arkansas	0	45	150	396	7	23	4	32	3	125
New Hampshire	2	22					2	39	0	2
November, 1926										
Arizona	0	14	0		55		0	66	0	6
Georgia	1	367	285	125	11	10	4	86	48	89
Massachusetts	3	418	46	1	161	1	26	1,191	0	44
New Hampshire	0	33	3					55	0	
New Jersey	4	516	51	1	120		11	568	0	94
Tennessee	1	457	211	66	55	22	0	339	11	267

October, 1926

	Cases
Chicken pox:	
Arkansas	32
Hookworm disease	
Arkansas	2
Mumps	
Arkansas	15
Paratyphoid fever	
Arkansas	3
Whooping cough:	
Arkansas	70

November, 1926

	Cases
Anthrax	
Massachusetts	2
Chicken pox:	
Arizona	8
Georgia	45
Massachusetts	1,232
New Jersey	753
Tennessee	82
Conjunctivitis (infectious):	
Georgia	3
Dengue:	
Georgia	1
Dysentery:	
Georgia	17
Tennessee	8
German measles.	
Georgia	5
Massachusetts	36
New Jersey	37
Hookworm disease	
Georgia	4
Lead poisoning	
Massachusetts	6
New Jersey	3
Lethargic encephalitis	
Massachusetts	3
Tennessee	3
Mumps	
Arizona	26
Georgia	15
Massachusetts	599
Tennessee	1
Ophthalmia neonatorum.	
Massachusetts	148
New Jersey	3
Paratyphoid fever	
Georgia	2
New Jersey	1
Tennessee	1

	Cases
Rabies (in man):	
Tennessee	3
Septic sore throat	
Georgia	38
Massachusetts	10
Trachoma	
Arizona	11
Massachusetts	7
New Jersey	3

	Cases
Trichinosis	
Massachusetts	1
Typhus fever	
Georgia	2
Whooping cough	
Arizona	10
Georgia	83
Massachusetts	442
New Jersey	607
Tennessee	259

Number of Cases of Certain Communicable Diseases Reported for the Month of October, 1926, by State Health Officers

	Chicken pox	Diphtheria	Measles	Mumps	Paratyphoid fever	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	7	366	42	20	--------	130	8	394	360	120
Arizona	1	14	72	10	--------	35	0	70	11	4
Arkansas	32	45	7	15	3	32	3	26	125	70
California	567	526	1,952	467	3	709	63	700	72	225
Colorado	59	84	22	6	--------	161	3	113	29	23
Connecticut	164	108	62	14	2	139	0	116	18	134
Delaware	8	15	3	--------	--------	51	0	[1] 5	24	4
Dist. of Columbia	10	107	3	--------	--------	48	0	101	9	33
Florida	3	181	5	9	3	33	22	68	52	20
Georgia	31	393	13	30	0	92	30	71	296	56
Idaho	65	28	31	9	--------	127	1	4	16	10
Illinois	652	493	615	120	4	816	5	1,399	386	773
Indiana	218	470	100	4	--------	448	53	185	232	188
Iowa	98	114	28	11	--------	177	12	51	33	30
Kansas	197	134	256	25	1	266	13	137	77	106
Kentucky [3]	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
Louisiana	1	158	1	2	--------	53	4	[1] 180	111	9
Maine	148	21	255	23	--------	120	0	37	29	171
Maryland	114	137	23	40	--------	166	0	215	204	220
Massachusetts	420	291	120	269	--------	729	0	490	87	322
Michigan	410	787	111	34	--------	669	34	554	93	438
Minnesota	388	346	320	--------	--------	919	13	198	38	119
Mississippi	132	220	220	191	--------	103	18	278	292	782
Missouri	124	308	72	16	--------	435	9	180	221	171
Montana	129	9	308	2	--------	254	35	34	19	24
Nebraska [4]	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
Nevada [4]	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
New Hampshire	--------	22	--------	--------	--------	39	--------	--------	2	--------
New Jersey	269	405	48	--------	1	330	0	436	105	427
New Mexico	4	17	5	3	--------	52	1	97	101	18
New York	866	868	761	353	4	625	17	1,527	340	1,065
North Carolina	63	810	81	--------	--------	388	55	--------	209	617
North Dakota	53	14	215	49	3	191	24	15	27	85
Ohio	751	875	87	70	4	880	44	604	296	645
Oklahoma [5]	22	179	22	5	--------	118	38	80	473	54
Oregon	91	72	53	42	--------	218	79	73	37	27
Pennsylvania [3]	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
Rhode Island	17	41	6	1	--------	21	0	30	4	10
South Carolina	44	676	46	--------	17	114	14	177	356	202
South Dakota	33	37	315	1	--------	180	4	6	18	70
Tennessee	30	524	20	5	--------	328	16	167	725	346
Texas [3]	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
Utah [2]	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
Vermont	64	9	386	37	--------	12	0	[1] 20	6	334
Virginia	118	689	127	--------	--------	393	11	[1] 224	220	723
Washington	370	191	80	93	2	293	90	116	55	87
West Virginia	124	264	78	--------	--------	352	4	117	344	314
Wisconsin	362	172	562	115	--------	296	29	131	28	597
Wyoming	39	6	21	2	--------	59	0	2	6	29

[1] Pulmonary.
[2] Report received weekly.
[3] Report not received at time of going to press.
[4] Reports received annually.
[5] Exclusive of Oklahoma City and Tulsa.

Case Rates per 1,000 Population (Annual Basis) for the Month of October, 1926

	Chicken pox	Diphtheria	Measles	Mumps	Paratyphoid fever	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	0 03	1 73	0 20	0 09		0 62	0 04	1 86	1 70	0 57
Arizona	03	30	2 01	28		98	00	1 96	31	11
Arkansas	20	28	04	09	0 02	20	02	16	79	44
California	1 62	1 50	5 57	1 33	01	2 02	18	2 00	21	64
Colorado	67	96	25	07		1 83	03	1 29	33	26
Connecticut	1 24	82	47	11	02	1 05	00	88	14	1 01
Delaware	40	75	15			2 54	00	[1] 25	1 19	20
District of Columbia	23	2 48	07			1 11	00	2 34	21	76
Florida	.03	1 91	05	10	03	35	23	72	55	21
Georgia	12	1 50	06	11	03	35	11	27	1 13	21
Idaho	1 52	66	73	21		2 97	02	09	37	23
Illinois	1 09	82	1 03	20	01	1 36	01	2 34	64	1 29
Indiana	83	1 [illegible]	28	02		1 71	20	71	89	72
Iowa	46	53	13	05		83	06	24	15	14
Kansas	1 27	87	1 65	16	01	1.72	10	89	50	69
Kentucky [2]										
Louisiana	01	98	01	01		35	02	[1] 1 12	69	06
Maine	2 22	31	3 82	34		1 80	00	55	43	2 56
Maryland	86	1 04	17	30		1 26	00	1 63	1 55	1 67
Massachusetts	1 18	82	34	76		2 05	00	1 38	25	91
Michigan	1 14	2 18	31	09		1 86	09	1 54	26	1 22
Minnesota	1 76	1 57	1 45			4.30	06	89	17	54
Mississippi	87	1 51	1 45	1 26		68	12	1 83	1 92	5 14
Missouri	42	1 04	24	05		1 47	03	61	75	58
Montana	2 29	16	5 46	04		4 50	62	96	34	43
Nebraska [3]										
Nevada [4]										
New Hampshire		57				1 02				05
New Jersey	.89	1 34	16		00	1 09	00	1.44	.35	1 41
New Mexico	12	.52	15	09		1 60	.03	2.99	3 11	55
New York	91	.91	80	.37	00	66	02	1 60	36	1 12
North Carolina	27	3 41	34			1 63	.23		.88	2 60
North Dakota	.90	.24	3 65	.83	.05	3 24	.41	.25	46	1.44
Ohio	1.38	1.60	16	13	.01	1 61	.08	1.11	54	1 18
Oklahoma [5]	.13	1.04	13	.03		.68	.22	.46	2.63	.31
Oregon	1 25	99	73	.58		2.99	1.08	1 00	.51	.37
Pennsylvania [3]										
Rhode Island	.31	.75	11	.02		38	00	55	.07	.35
South Carolina	29	4 43	30		11	.75	.09	1.16	2 53	1 32
South Dakota	.58	.65	5 52	.02		3.15	07	11	32	1 33
Tennessee	.14	2 53	10	02		1 58	.08	81	3 50	1 67
Texas [3]										
Utah [3]										
Vermont	2 14	.30	12 90	1 24		40	00	[1] 67	20	11.16
Virginia	56	3 28	60			1 87	05	[1] 1.07	1 05	3 44
Washington	2.90	1 50	63	73	02	2 30	.71	1 15	43	.29
West Virginia	90	1 91	56			2 55	03	85	2 49	2 27
Wisconsin	1.51	.72	2.34	48		1 23	.12	54	.12	2.48
Wyoming	2.02	.31	1 09	10		3 06	.00	10	.31	1.51

[1] Pulmonary
[2] Reports received weekly.
[3] Report not received at time of going to press.
[4] Reports received annually.
[5] Exclusive of Oklahoma City and Tulsa.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended December 4, 1926, 41 States reported 2,525 cases of diphtheria For the week ended December 5, 1925, the same States reported 2,295 cases of this disease. One hundred cities, situated in all parts of the country and having an aggregate population of more than 30,000,000, reported 1,299 cases of diphtheria for the week ended December, 4, 1926. Last year for the corresponding week they reported 942 cases. The estimated expectancy for these cities was 1,376 cases The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles—Thirty-eight States reported 5,178 cases of measles for the week ended December 4, 1926, and 4,443 cases of this disease for the week ended December 5, 1925. One hundred cities reported 1,021 cases of measles for the week this year and 1,963 cases last year

Poliomyelitis—The health officers of 42 States reported 34 cases of poliomyelitis for the week ended December 4, 1926 The same States reported 37 cases for the week ended December 5, 1925

Scarlet fever—Scarlet fever was reported for the week as follows: Forty-one States—this year, 4,038 cases. last year, 3,704 cases; 100 cities—this year, 1,392 cases; last year, 1,199 cases; estimated expectancy, 1,031 cases.

Smallpox—For the week ended December 4, 1926, 41 States reported 612 cases of smallpox Last year for the corresponding week they reported 433 cases One hundred cities reported smallpox for the week as follows: 1926, 83 cases; 1925, 73 cases; estimated expectancy, 55 cases. No deaths from smallpox were reported by these cities for the week this year.

Typhoid fever—Five hundred and thirty-seven cases of typhoid fever were reported for the week ended December 4, 1926, by 41 States For the corresponding week of 1925 the same States reported 667 cases of this disease. One hundred cities reported 60 cases of typhoid fever for the week this year and 110 cases for the corresponding week last year. The estimated expectancy for these cities was 86 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia were reported for the week by 94 cities, with a population of more than 29,350,000, as follows: 1926, 771 deaths, 1925, 860 deaths.

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City reports for week ended December 4, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1925, estimated	Chicken pox cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	32	2	1	0	0	2	0	1
New Hampshire									
Concord	22,546	0	1	0	0	0	11	0	0
Manchester	83,097	3	5	0	0	1	3	0	3
Vermont									
Barre	10,008	4	1	1	0	0	18	0	0
Burlington	24,089	1	1	0	0	0	1	0	2
Massachusetts									
Boston	779,620	110	66	33	5	1	5	56	18
Fall River	128,993	15	5	11	0	0	1	6	8
Springfield	142,065	12	5	5	0	2	2	1	2
Worcester	190,757	28	6	5	0	0	0	3	3
Rhode Island									
Pawtucket	69,760	7	2	2	0	0	0	0	5
Providence	267,918	0	10	9	0	0	0	0	3
Connecticut									
Bridgeport	(1)	4	11	1	1	0	2	1	3
Hartford	160,197	10	9	3	0	0	0	0	2
New Haven	178,927	16	4	2	0	0	2	0	5
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	57	25	24	1	0	5	1	14
New York	5,873,356	230	219	203	57	11	22	136	182
Rochester	316,786	10	10	11	2	0	2	0	5
Syracuse	182,003	10	11	1	-------	0	10	10	4
New Jersey:									
Camden	128,642	3	6	7	1	1	1	1	1
Newark	452,513	35	19	5	8	2	9	14	9
Trenton	132,020	4	7	9	0	1	0	0	5
Pennsylvania									
Philadelphia	1,979,364	200	86	64	2	9	9	13	64
Pittsburgh	631,563	85	32	26	-------	3	14	8	18
Reading	112,707	20	5	4	-------	0	2	2	0
EAST NORTH CENTRAL									
Ohio									
Cincinnati	409,333	23	22	15	0	1	0	28	10
Cleveland	936,485	107	49	101	1	1	5	3	10
Columbus	279,836	23	8	17	0	0	0	1	7
Toledo	287,380	102	19	5	0	0	4	0	7
Indiana									
Fort Wayne	97,846	5	5	8	0	0	8	0	2
Indianapolis	358,819	47	13	25	0	1	1	0	7
South Bend	80,091	8	2	2	0	0	13	0	0
Terre Haute	71,071	4	3	2	0	0	0	0	1
Illinois									
Chicago	2,995,239	162	155	66	8	5	155	26	53
Peoria	81,564	15	2	1	0	1	67	10	3
Springfield	63,923	13	3	3	1	1	12	0	1

[1] No estimate made.

City reports for week ended December 4, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
EAST NORTH CENTRAL—Continued									
Michigan									
Detroit	1,245,824	127	74	112	9	4	5	25	16
Flint	130,316	47	14	4	0	0	2	0	1
Grand Rapids	153,698	9	7	2	0	0	1	0	2
Wisconsin									
Kenosha	50,891	22	2	0	0	0	9	18	2
Madison	46,385	26	1	2	0	0	0	0	0
Milwaukee	509,192	51	31	26	0	0	11	41	15
Racine	67,707	53	3	3	0	0	0	17	1
Superior	39,671	0	1	2	0	0	0	0	2
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	11	3	0	0	0	35	0	3
Minneapolis	425,435	244	28	40	0	1	2	0	5
St Paul	246,001	55	21	9	0	0	3	0	9
Iowa									
Davenport	52,469	0	2	2	0	-------	10	0	-------
Sioux City	76,411	18	3	3	0	-------	0	0	-------
Waterloo	36,771	37	0	0	0	-------	2	0	-------
Missouri									
Kansas City	367,481	-------	14	-------	-------	-------	-------	-------	-------
St Joseph	78,342	2	5	0	0	0	0	0	1
St Louis	821,543	45	60	31	0	0	2	4	-------
North Dakota									
Fargo	26,403	12	1	0	0	0	2	0	0
South Dakota									
Aberdeen	15,036	24	0	0	0	-------	2	1	-------
Sioux Falls	30,127	7	1	0	0	-------	0	1	-------
Nebraska									
Lincoln	60,941	12	2	1	0	0	0	0	0
Omaha	211,768	14	7	5	0	0	5	6	7
Kansas									
Topeka	55,411	30	4	0	0	0	1	0	2
Wichita	88,367	36	8	6	0	0	2	1	2
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	4	4	1	0	0	0	0	1
Maryland									
Baltimore	796,296	145	37	39	12	1	2	9	10
Cumberland	33,741	4	2	0	0	0	0	0	0
Frederick	12,035	4	0	1	0	0	0	0	0
District of Columbia									
Washington	497,906	31	28	23	0	2	0	0	10
Virginia									
Lynchburg	30,395	1	2	4	0	2	0	0	3
Norfolk	(1)	0	5	4	0	0	1	0	2
Richmond	186,403	8	14	13	0	0	14	0	0
Roanoke	58,208	9	4	2	0	0	0	0	1
West Virginia									
Charleston	49,019	5	3	1	0	1	4	0	3
Huntington	63,485	0	2	4	0	-------	0	0	-------
Wheeling	56,208	18	4	3	0	0	1	0	1
North Carolina									
Raleigh	30,371	1	2	3	0	0	0	0	2
Wilmington	37,061	14	1	2	0	0	0	0	1
Winston-Salem	69,031	9	2	4	0	1	0	0	1
South Carolina									
Charleston	73,125	0	2	1	54	2	1	0	4
Columbia	41,225	0	1	2	0	0	0	0	0
Greenville	27,311	1	0	3	0	0	0	0	1
Georgia									
Atlanta	(1)	1	5	20	20	2	1	0	9
Brunswick	16,809	0	1	0	0	0	0	0	0
Savannah	93,134	1	3	0	14	0	0	0	3
Florida									
Miami	69,754	0	-------	5	0	0	2	1	4
St Petersburg	26,847	-------	1	-------	-------	0	-------	-------	0
Tampa	94,743	0	2	3	0	0	2	0	4

[1] No estimate made

City reports for week ending December 4, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	2	3	6	0	0	0	0	4
Louisville	305,935	13	13	6	0	0	0	1	13
Tennessee									
Memphis	174,533	13	11	5	0	0	3	0	0
Nashville	136,220	0	5	18	0	3	0	0	3
Alabama:									
Birmingham	205,670	5	6	14	9	5	2	0	5
Mobile	65,955	0	2	1	0	0	0	0	1
Montgomery	46,481	1	1	8	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	31,643	0	2	3	0		0	0	
Little Rock	74,216	0	3	0	0		3	0	3
Louisiana:									
New Orleans	414,493	3	12	17	5	7	28	0	19
Shreveport	57,857	0	1	1	0	0	0	0	2
Oklahoma									
Oklahoma City	(1)	0	4	1	0	2	2	0	6
Texas:									
Dallas	194,450	2	13	31	0	1	1	0	4
Galveston	48,375	0	1	3	0	0	0	0	2
Houston	164,954	3	5	13	0	0	0	0	4
San Antonio	198,069	0	4	6	0	1	1	0	3
MOUNTAIN									
Montana									
Billings	17,971	5	0	0	0	1	93	0	0
Great Falls	29,883	13	1	0	0	0	0	0	2
Helena	12,037	0	1	1	0	0	0	0	1
Missoula	12,668	1	0	1	0	0	0	5	0
Idaho									
Boise	23,042	4	0	1	0	0	0	0	0
Colorado									
Denver	280,911	18	13	15		4	14	1	11
Pueblo	43,787	8	5	0	0	0	0	0	1
New Mexico:									
Albuquerque	21,000	2	1	0	0	0	0	1	1
Arizona									
Phoenix	38,669	0	0	1	0	0	0	0	4
Utah									
Salt Lake City	130,948	38	3	7	0	0	205	2	8
Nevada									
Reno	12,665	1	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	(1)	73	7	3	0		10	21	
Spokane	108,897	21	4	1	0		124	0	
Tacoma	104,455	12	3	16	0	0	0	0	4
Oregon:									
Portland	282,383	12	10	10	0	0	4	2	6
California:									
Los Angeles	(1)	65	42	56	7	1	6	12	25
Sacramento	72,260	0	3	4	1	1	43	14	1
San Francisco	557,530	25	17	20	3	1	78	11	13

[1] No estimate made.

City reports for week ending December 4, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough cases reported	Deaths, all causes
NEW ENGLAND											
Maine											
Portland	2	3	0	0	0	0	1	1	0	23	24
New Hampshire											
Concord	0	2	0	0	0	0	0	0	0	0	13
Manchester	2	0	0	0	0	2	0	0	0	0	27
Vermont											
Barre	0	0	0	0	0	1	0	0	0	2	4
Burlington	1	0	0	0	0	0	0	0	0	22	4
Massachusetts											
Boston	41	80	0	0	0	13	2	1	0	15	214
Fall River	1	5	0	0	0	2	1	1	0	11	37
Springfield	7	3	0	0	0	0	1	0	0	5	34
Worcester	11	9	0	0	0	2	0	0	0	5	46
Rhode Island											
Pawtucket	1	0	0	0	0	0	0	0	0	0	18
Providence	7	14	0	0	0	2	1	0	0	1	58
Connecticut											
Bridgeport	8	16	0	0	0	0	1	0	0	0	26
Hartford	6	3	0	0	0	1	0	0	0	1	25
New Haven	7	3	0	0	0	0	1	0	0	1	26
MIDDLE ATLANTIC											
New York											
Buffalo	20	12	0	0	0	4	2	3	2	19	132
New York	135	178	0	1	0	[1] 86	20	7	1	80	1,341
Rochester	11	6	0	0	0	1	1	2	0	16	57
Syracuse	12	13	0	0	0	1	1	0	0	6	40
New Jersey											
Camden	3	2	1	0	0	3	0	1	1	0	33
Newark	16	24	0	0	0	3	1	0	0	45	88
Trenton	2	0	0	0	0	4	0	0	0	6	43
Pennsylvania											
Philadelphia	69	63	0	0	0	36	5	4	2	51	557
Pittsburgh	37	16	1	0	0	6	1	1	0	17	163
Reading	2	0	0	0	0	2	0	0	1	8	33
EAST NORTH CENTRAL											
Ohio											
Cincinnati	14	18	0	0	0	5	1	3	0	3	132
Cleveland	32	25	1	0	0	9	2	0	0	18	168
Columbus	11	19	1	3	0	7	0	0	0	9	83
Toledo	11	14	1	2	0	6	1	0	0	49	85
Indiana											
Fort Wayne	2	3	0	1	0	0	0	0	1	1	18
Indianapolis	12	22	4	26	0	7	1	0	0	14	96
South Bend	3	1	1	0	0	1	0	0	0	0	7
Terre Haute	4	9	0	0	0	0	0	0	0	1	11
Illinois											
Chicago	118	121	0	0	0	38	5	3	1	46	696
Peoria	6	5	1	0	0	0	0	0	0	0	22
Springfield	2	3	0	0	0	2	0	0	0	5	19
Michigan											
Detroit	78	83	2	0	0	20	3	2	0	48	250
Flint	8	15	0	1	0	1	0	0	0	1	22
Grand Rapids	8	12	0	0	0	1	1	0	0	2	38
Wisconsin											
Kenosha	1	6	1	0	0	1	0	0	0	8	11
Madison	1	9	0	-------	0	0	0	0	0	1	-------
Milwaukee	28	8	1	0	0	3	1	1	1	42	95
Racine	4	3	0	0	0	0	0	0	0	7	18
Superior	2	0	1	0	0	0	0	0	0	0	4

[1] Pulmonary tuberculosis only.

City reports for week ended December 4, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough cases reported	Deaths, all causes
WEST NORTH CENTRAL											
Minnesota											
Duluth	5	12	0	0	0	3	0	0	0	0	20
Minneapolis	44	87	3	0	0	3	1	0	0	0	84
St. Paul	18	19	10	4	0	1	0	1	0	6	53
Iowa											
Davenport	0	2	1	0			0	0		4	
Sioux City	3	8	0	0			0	0		0	
Waterloo	3	2	0	0			0	0		2	
Missouri											
Kansas City	11		0				1				
St. Joseph	3	3	0	0	0	2	0	0	0	0	21
St. Louis	36	33	0	0	0	7	2	1	0	19	255
North Dakota											
Fargo	3	7	0	0	0	0	0	0	0	0	6
South Dakota											
Aberdeen	1	17	0	0			0	0		0	
Sioux Falls	2	1	0	0			0	0		0	
Nebraska											
Lincoln	2	6	0	0	0	0	0	0	0	2	16
Omaha	5	10	4	1	0	1	0	0	0	2	55
Kansas											
Topeka	2	2	0	19	0	1	0	2	0	3	10
Wichita	3	12	0	0	0	1	1	0	0	4	24
SOUTH ATLANTIC											
Delaware											
Wilmington	3	16	0	0	0	2	1	0	0	0	24
Maryland											
Baltimore	21	16	0	0	0	12	3	3	0	48	195
Cumberland	1	2	0	0	0	1	1	0	1	0	12
Frederick	0	2	0	0	0	0	0	0	0	1	4
District of Col.											
Washington	20	10	0	0	0	10	4	0	0	0	150
Virginia											
Lynchburg	1	11	0	0	0	0	0	0	0	0	22
Norfolk	2	3	0	0	0	1	0	0	0	2	
Richmond	7	6	0	0	0	4	1	1	0	5	41
Roanoke	2	5	0	0	0	1	0	0	0	9	18
West Virginia											
Charleston	1	3	0	0	0	1	1	0	0	0	28
Huntington	2	4	0	0			0	0		0	
Wheeling	2	0	0	0	0	0	0	2	0	3	15
North Carolina											
Raleigh	2	8	0	0	0	0	0	0	0	7	19
Wilmington	1	2	0	0	0	0	0	0	0	7	13
Winston-Salem	2	1	0	0	0	1	0	1	0	9	22
South Carolina											
Charleston	1	1	0	1	0	2	0	1	0	0	24
Columbia	0	1	0	0	0	0	0	0	0	0	
Greenville	0	0	0	0	0	1	0	0	0	1	18
Georgia											
Atlanta	5	8	1	8	0	0	1	0	2	0	77
Brunswick	0	0	0	0	0	1	0	0	0	0	6
Savannah	1	1	0	1	0	2	0	0	0	0	24
Florida											
Miami		3		0	0	2		0	0	0	51
St. Petersburg	0		0		0	0	0		0		11
Tampa	1	1	1	0	0	4	0	1	0	2	32
EAST SOUTH CENTRAL											
Kentucky											
Covington	2	1	0	0	0	3	0	0	0	0	23
Louisville	5	11	0	0	0	1	1	1	1	12	94
Tennessee											
Memphis	5	24	0	0	0	0	1	2	1	13	49
Nashville	3	7	0	0	0	4	1	2	0	1	38
Alabama											
Birmingham	4	4	1	0	0	6	2	3	0	2	71
Mobile	2	0	0	0	0	0	1	0	0	0	14
Montgomery	1	0	0	0	0	0	0	0	0	0	28

City reports for week ended December 4, 1939—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough cases reported	Deaths, all causes
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	2	0	0	0			0	0		0	
Little Rock	2	1	0	0		3	1	0		0	
Louisiana											
New Orleans	7	17	0	0	0	3	2	1	0	1	143
Shreveport	1	0	0	0	0	1	1	0	0	0	21
Oklahoma											
Oklahoma City	3	2	0	0	0	0	1	0	0	0	31
Texas											
Dallas	4	20	0	2	0	5	1	0	0	1	48
Galveston	0	3	0	0	0	3	0	0	0	0	18
Houston	2	8	0	0	0	0	0	1	0	0	62
San Antonio	1	0	0	0	0	11	1	0	0	0	47
MOUNTAIN											
Montana											
Billings	1	2	0	0	0	0	0	0	0	0	9
Great Falls	1	6	0	0	0	0	0	0	0	0	4
Helena	0	0	0	1	0	0	0	0	0	0	2
Missoula	0	8	0	0	0	0	0	1	0	0	6
Idaho											
Boise	1	2	1	0	0	0	0	0	0	0	5
Colorado											
Denver	10	83	4	0	0	11	0	0	0	1	82
Pueblo	2	0	0	0	0	1	0	0	0	0	10
New Mexico											
Albuquerque	0	2	0	0	0	5	0	2	0	1	17
Arizona											
Phoenix	3	3	0	0	0	13	0	0	0	0	33
Utah											
Salt Lake City	3	1	1	1	0	3	1	0	0	1	48
Nevada											
Reno	0	0	1	0	0	0	0	0	0	0	2
PACIFIC											
Washington:											
Seattle	7	17	3	0			1	2		2	
Spokane	6	20	4	3			0	2		1	
Tacoma	3	8	3	3	0	2	0	0	0	3	30
Oregon											
Portland	7	21	5	1	0	0	1	0	0	0	69
California											
Los Angeles	20	39	3	4	0	22	2	1	0	6	270
Sacramento	2	4	1	2	0	1	1	0	0	0	22
San Francisco	11	11	1	1	0	9	0	1	0	14	149

City reports for week ended December 4, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts									
Boston	2	1	0	0	0	0	1	0	0
Connecticut									
Hartford	0	0	1	1	0	0	0	0	0
MIDDLE ATLANTIC									
New York									
New York	1	1	3	3	0	0	3	1	0
New Jersey									
Camden	0	0	0	0	0	0	0	1	0
Newark	0	0	0	0	0	0	0	1	0
Pennsylvania									
Philadelphia	0	0	1	1	0	0	0	0	0
Pittsburgh	0	0	0	1	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio									
Columbus	0	0	0	0	0	0	0	1	0
Illinois									
Chicago	2	1	1	1	0	0	1	1	0
Peoria	0	1	0	0	0	0	0	0	0
Michigan									
Grand Rapids	1	1	0	0	0	0	0	0	0
Wisconsin									
Milwaukee	0	0	1	1	0	0	0	0	0
WEST NORTH CENTRAL									
Missouri									
St Louis	2	0	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland									
Baltimore [1]	1	2	1	0	0	0	0	0	0
North Carolina									
Raleigh	0	0	0	0	0	1	0	0	0
Wilmington	0	0	0	0	0	1	0	0	0
South Carolina									
Charleston [2]	0	0	0	0	1	0	0	0	0
Georgia									
Atlanta	1	0	0	0	0	1	0	0	0
Brunswick	0	0	0	0	0	1	0	0	0
Florida									
St Petersburg	0	1	0	0	0	0	0	0	0
EAST SOUTH CENTRAL									
Tennessee									
Memphis	0	1	0	0	0	0	0	0	0
Alabama									
Birmingham	0	0	0	0	2	1	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Little Rock	0	0	0	0	0	2	0	0	0
Louisiana									
New Orleans	1	0	0	0	0	0	0	0	0
Texas									
Dallas	0	0	0	0	2	0	0	0	0
Galveston	0	0	0	0	0	1	0	0	0
PACIFIC									
Washington									
Seattle	1	0	2	0	0	0	0	0	0
Spokane	3	0	0	0	0	0	0	0	0
California									
Los Angeles	0	0	1	0	1	1	0	3	0
San Francisco	0	0	0	1	0	0	1	0	0

[1] Typhus fever; 1 case at Baltimore, Md.

[2] Dengue; 1 case at Charleston, S. C.

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended December 4, 1926, compared with those for a like period ended December 5, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below

Summary of weekly reports from cities, October 31 to December 4, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov 13, 1926	Nov 21, 1925	Nov 20, 1926	Nov 28, 1925	Nov 27, 1926	Dec 5, 1925	Dec 4, 1926
101 cities	161	224	169	229	176	230	154	[2] 212	165	[3] 225
New England	93	118	122	135	139	139	101	132	120	173
Middle Atlantic	125	142	140	162	143	159	150	154	137	176
East North Central	178	276	185	264	180	292	155	[2] 259	164	267
West North Central	264	252	235	222	221	213	170	191	272	[3] 221
South Atlantic	198	319	236	391	271	278	207	284	207	242
East South Central	126	425	63	265	121	368	110	218	116	301
West South Central	189	254	203	379	167	327	172	301	264	318
Mountain	277	218	240	182	305	146	129	200	231	228
Pacific	141	288	138	232	177	326	157	305	122	270
MEASLES CASE RATES										
101 cities	149	81	169	165	222	135	205	[2] 133	342	[3] 177
New England	822	66	903	31	1,090	47	798	57	1,526	102
Middle Atlantic	159	16	170	44	255	28	238	30	338	37
East North Central	70	80	84	100	97	121	118	[2] 131	243	145
West North Central	14	151	10	147	14	197	29	109	18	[3] 127
South Atlantic	144	21	217	24	271	54	330	23	516	49
East South Central	16	26	16	10	47	31	32	16	37	26
West South Central	9	9	9	26	9	26	4	103	4	142
Mountain	37	792	46	1,529	28	1,948	9	2,540	9	2,840
Pacific	17	315	19	280	30	491	25	340	55	704
SCARLET FEVER CASE RATES										
101 cities	163	189	182	207	178	213	197	[2] 215	211	[3] 242
New England	261	265	237	352	201	331	206	286	216	326
Middle Atlantic	110	94	142	125	143	129	149	137	166	156
East North Central	159	189	180	185	187	202	210	[2] 201	261	239
West North Central	358	415	354	346	401	407	438	411	405	[3] 459
South Atlantic	173	199	161	178	115	145	134	158	119	182
East South Central	100	249	168	296	126	228	168	239	163	244
West South Central	97	112	114	142	88	116	132	198	106	211
Mountain	166	583	176	701	157	637	166	783	240	929
Pacific	155	205	196	280	188	337	237	251	215	267

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported Populations used are estimated as of July 1, 1925 and 1926, respectively

[2] Racine, Wis., not included.

[3] Kansas City, Mo , not included.

Summary of weekly reports from cities, October 31 to December 4, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

SMALLPOX CASE RATES

	Week ended—									
	Nov 7, 1925	Nov 6, 1926	Nov 14, 1925	Nov. 13, 1926	Nov 21, 1925	Nov 20, 1926	Nov 28, 1925	Nov 27, 1926	Dec 5, 1925	Dec 4, 1926
101 cities	9	3	8	5	16	5	16	[2] 5	13	[3] 14
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	1
East North Central	12	6	13	10	31	3	31	[2] 8	13	21
West North Central	10	2	4	10	16	4	10	30	18	[3] 57
South Atlantic	12	0	6	2	19	4	2	4	4	19
East South Central	26	10	32	10	11	0	11	5	11	0
West South Central	0	9	0	30	0	4	9	4	13	9
Mountain	18	0	18	9	18	0	9	0	0	18
Pacific	47	3	41	5	75	49	94	5	105	35

TYPHOID FEVER CASE RATES

101 cities	27	24	11	21	17	16	13	[2] 12	19	[3] 10
New England	22	17	2	9	31	7	17	7	22	7
Middle Atlantic	12	12	8	21	20	21	14	13	26	9
East North Central	18	13	9	10	3	5	3	[2] 4	8	6
West North Central	31	26	16	16	14	6	8	8	10	[3] 9
South Atlantic	60	45	10	36	29	23	27	19	19	17
East South Central	168	104	42	52	32	36	21	31	53	42
West South Central	48	22	57	34	31	13	31	17	40	9
Mountain	37	91	9	27	18	27	18	18	0	9
Pacific	8	46	3	30	6	30	14	22	14	16

[2] Racine, Wis., not included.
[3] Kansas City, Mo., not included.

INFLUENZA DEATH RATES

95 cities	13	11	11	14	8	10	9	[2] 10	11	[3] 14
New England	5	12	7	2	2	2	12	9	10	7
Middle Atlantic	14	9	14	10	6	10	8	7	10	13
East North Central	11	6	10	10	6	10	5	[2] 9	6	9
West North Central	6	6	13	13	2	6	2	2	6	[3] 2
South Atlantic	17	15	2	17	13	8	10	15	17	21
East South Central	37	21	26	26	42	31	26	[illegible]	42	42
West South Central	15	43	29	71	10	33	34	[illegible]	39	43
Mountain	9	18	0	27	18	9	9	36	18	46
Pacific	15	7	4	14	18	4	4	0	4	11

PNEUMONIA DEATH RATES

95 cities	133	101	132	106	146	123	126	[2] 126	144	[3] 123
New England	134	99	120	90	139	104	156	132	180	118
Middle Atlantic	143	113	143	114	160	135	145	138	161	[illegible]
East North Central	119	84	131	85	139	106	95	[2] 100	142	87
West North Central	86	84	81	76	101	120	81	74	54	[3] 72
South Atlantic	194	120	152	139	146	143	134	165	159	105
East South Central	152	99	163	166	221	171	179	104	131	135
West South Central	150	118	102	113	155	156	150	213	135	161
Mountain	102	164	176	155	222	109	157	146	157	209
Pacific	91	50	109	99	87	75	98	124	98	153

[2] Racine, Wis., not included. [3] Kansas City, Mo., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,694
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended November 27, 1926 —The following report for the week ended November 27, 1926, was transmitted by the Eastern Bureau of the Secretariat of the Health Section of the League of Nations, located at Singapore, to the headquarters at Geneva·

Maritime towns	Plague		Cholera		Smallpox		Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths		Cases	Deaths	Cases	Deaths	Cases	Deaths
British India							Siam Bangkok	0	0	0	0	1	0
Bombay	----	0	----	0	5	4	French Indo-China						
Calcutta	----	0	----	16	22	18	Turane	0	0	1	0	0	0
Rangoon	----	3	----	1	0	0	Haiphong	0	0	----	32	0	0
Madras	----	0	----	0	1	0	Chosen Fusan	0	0	0	0	1	0
Vizagapatam	1	0	----	0	0	0	Kwantung Dairen	0	0	0	0	1	0
Tuticorin	----	0	----	0	1	0	Egypt Alexandria	1	0	0	0	0	0
Ceylon Colombo	1	1	0	0	0	0	Mauritius Port Louis	8	6	0	0	0	0
Straits Settlements							Union of South Africa						
Singapore	1	0	1	1	0	0	Durban	0	0	0	0	2	0
Dutch East Indies													
Cheribon	0	0	0	0	0	0							

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia —Aden, Jeddah, Kamaran, Perim

Iraq —Basrah

Persia —Mohammerah, Bender-Abbas, Bushire

British India —Karachi, Chittagong, Cochin, Negapatam

Portuguese Indies —Nova Goa

Federated Malay States —Port Swettenham

Straits Settlements —Penang

Dutch East Indies —Smarang, Batavia, Surabaya, Sabang, Makassar, Banjermasin, Palembang, Belawan-Deli, Padang, Tarakan, Menado Balikpapan.

French Indo China —Saigon and Cholon

Sarawak —Kuching

British North Borneo —Sandakan, Jesselton, Kudat, Tawao

Portuguese Timor —Dilly

China —Amoy Shanghai (International Settlement)

Hong-Kong

Macao

Formosa —Keelung

Japan —Yokohama, Osaka, Nagasaki, Niigata, Tsuruga, Hakodate, Shimonoseki, Moji Kobe

Korea —Chemulpo

Manchuria —Mukden, Changchun, Harbin, Antung, Yingkow

Kwantung—Port Arthur.

U S S R —Vladivostok.

AUSTRALASIA AND OCEANIA

Australia —Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island

New Guinea —Port Moresby

New Britain Mandated Territory —Rabaul and Kokopo

New Zealand —Auckland, Wellington, Christchurch, Invercargill, Dunedin.

New Caledonia —Noumea

Fiji —Suva

Hawaii —Honolulu

Society Islands —Papeete

AFRICA

Egypt —Port Said, Suez.

Anglo-Egyptian Sudan —Port Sudan, Suakin

Eritrea —Massaua

French Somaliland —Jibuti.

British Somaliland —Berbera

Italian Somaliland —Mogadiscio

Kenya.—Mombasa

Zanzibar.—Zanzibar

Tanganyika —Dar-es-Salaam

Seychelles —Victoria.

Madagascar —Majunga, Tamatave

Portuguese East Africa —Mozambique, Beira, Lourenço-Marques.

Union of South Africa —East London, Port Elizabeth, Cape Town.

Reports had not been received in time for distribution from—

Dutch East Indias.—Samarinda, Pontianak.
Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.

ARGENTINA

Plague—Province of Cordoba—November 20, 1926.—Under date of November 20, 1926, five cases of plague were reported at localities in the interior of the Province of Cordoba, Argentina. The cases were mild and have not been bacteriologically verified.

BRAZIL

Mortality—Communicable diseases—Santos—August 29–October 3, 1926.—During the six-week period ended October 3, 1926, 255 deaths from all causes were reported at Santos, Brazil, the greatest number of deaths reported during one week being 59 and the lowest 35. The deaths included influenza, 4; malaria, 4; measles, 8; puerperal fever, 2, tetanus, 3, tuberculosis, 42, typhoid fever, 4; whooping cough, 1. During the period under report dysentery was stated to have been present. Population, 150,000.

CANADA

Communicable diseases—Week ended November 27, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the week ended November 27, 1926, as follows:

Diseases	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Influenza	22							22
Poliomyelitis				2				2
Smallpox				34	2	21	4	61
Typhoid fever			3	10	2	14	3	32

CHINA

Communicable diseases—Canton—September, 1926.—During the month of September, 1926, communicable diseases were reported in Canton, China, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cholera	72	32	Measles	2	
Diphtheria	1		Smallpox	1	
Dysentery	10	4	Typhoid fever	28	2
Influenza	14				

Population, 1,300,000.

EGYPT

Plague—November 5–11, 1926.—During the week ended November 11, 1926, a case of plague was reported in Egypt, occurring in the district of Tanta.

Summary.—During the period January 1 to November 11, 1926, 142 cases of plague were reported in Egypt, as compared with 136 cases during the corresponding period of the year 1925.

GERMANY

Further relative to typhoid fever epidemic—Hanover.—Information dated November 22, 1926, shows that the epidemic of typhoid fever which was reported at Hanover, Germany, September 18, 1926, with a total of 1,504 cases under treatment and 42 fatalities to that date,[1] was considered terminated, only a few cases being reported at that time. The highest point of prevalence was reached with 2,000 cases under treatment. The total number of deaths reported was 267.

JAMAICA

Smallpox (alastrim)—October 31–November 27, 1926.—During the period October 31 to November 27, 1926, 20 cases of smallpox, reported as alastrim, were notified in the Island of Jamaica, occurring at localities outside of Kingston.

Other communicable diseases.—During the same period other communicable diseases were reported in the Island of Jamaica as follows:

Disease	Cases: Kingston	Cases: Other localities	Disease	Cases: Kingston	Cases: Other localities
Cerebrospinal meningitis		2	Puerperal fever		1
Chicken pox		5	Tuberculosis (pulmonary)	7	29
Dysentery	5	117	Typhoid fever	18	99

Population: Island, 916,620; Kingston, 62,707.

MADAGASCAR

Plague—September 16–30, 1926.—During the period September 16 to 30, 1926, 98 cases of plague with 93 deaths were reported in the island of Madagascar. The occurrence was distributed according to Provinces as follows: *Itasy*—Cases, 1; deaths, 1; *Majunga*—cases, 9; deaths, 8; *Moramanga*—cases, 23; deaths, 23; *Tananarive* (town)—cases, 4; deaths, 3, other places in Tananarive Province—cases, 58; deaths, 55. The distribution of occurrence according to type was: Bubonic—cases, 44; deaths, 41; pneumonic—cases, 32, deaths, 30; septicemic—cases, 22; deaths, 22.

[1] Public Health Reports, Oct. 29, 1926, page 2511.

PERU

Mortality from certain diseases—September–October, 1926.—Arequipa.—During the months of September and October, 1926, deaths from communicable diseases were reported at Arequipa, Peru, as follows: *September, 1926*—Gastroenteritis, 1 death; influenza with complications, 13 deaths; tuberculosis, 14; typhoid fever, 2. *October, 1926*—Gastroenteritis, 7, influenza, 8, tuberculosis, 19. Population, 43,000.

Disease prevalence.—Gastroenteritis in children, smallpox, tuberculosis, typhoid fever, and in winter bronchial affections and pneumonia, were stated to be the prevailing diseases at Arequipa.

Plague—October, 1926.—During the month of October, 1926, 36 cases of plague with 13 deaths were reported in Peru, occurring in the departments of Lambayeque, Libertad, Lima, and Piura. In the department of Cajamarca plague was reported present in one Province and locality, with an unreported number of cases. (See p. 3031.)

SENEGAL

Plague—Yellow fever—November 1–10, 1926.—During the period November 1 to 10, 1926, 55 cases of bubonic plague, with 27 deaths, occurring in natives, were reported from the interior of Senegal, West Africa. Five deaths from yellow fever, of which three were in Syrians and two in Europeans, were reported from the Kaolak region, Senegal.

Measures to prevent spread.—The infected areas were stated to have been isolated and measures taken to localize the outbreaks and prevent spread.

UNION OF SOUTH AFRICA

Plague—Cape Province—October 24–30, 1926.—During the week ended October 30, 1926, a fatal case of plague, occurring in a European, was reported in the Williston district, Cape Province, Union of South Africa. The case occurred on a farm, and the patient was in direct contact with and had helped to nurse the previously reported cases, who were members of his family.

Smallpox.—During the period under report outbreaks of smallpox were reported in the Cape Province, occurring in two districts. In Natal two new cases were reported in Inanda district, in Hindus, both contacts with previous cases removed from Shire's barracks, Durban. Twenty-two further cases were reported in Durban, making a total from date of original outbreak at Durban, week ended October 16, 1926, of 38 cases, with 8 deaths, occurring in Hindus.

Measures to prevent spread.—Isolation of all cases and suspects in hospital; surveillance of all contacts; vaccination or revaccination of the population in and around Durban.

Typhus fever—Cape Province—Orange Free State—September, 1926.—During the month of September, 1926, 48 cases of typhus fever with two deaths were reported in the Union of South Africa The occurrence was distributed as follows: *Cape Province*—Cases, 24, deaths, 2 *Orange Free State*—Cases, 24 The occurrence was in the colored or native population

YUGOSLAVIA

Communicable diseases—October, 1926—During the month of October, 1926, communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	66	13	Rabies	2	2
Cerebrospinal meningitis	7	2	Scarlet fever	334	74
Diphtheria	237	41	Tetanus	30	11
Dysentery	206	30	Typhoid fever	806	81
Lethargic encephalitis	1		Typhus fever	1	
Measles	524	2	Whooping cough	280	7

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended December 24, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Tsingtao	Oct 24-30			Present
India				
Calcutta	Oct 3-23	44	37	
Rangoon	Oct 24-30	1	1	
Siam				Oct 24-30, 1926 Cases, 34; deaths, 32 Apr 1-Oct. 30, 1926 Cases, 7,705, deaths, 5,075
Bangkok	Oct 24-30	1	1	

PLAGUE

Place	Date	Cases	Deaths	Remarks
Argentina				
Cordoba Province	Nov 20	5		
Ceylon				
Colombo	Oct 31-Nov 6	1	1	Provisional diagnosis
Egypt				Nov 5-11, 1926 One case Summary—Jan 1-Nov 11, 1926 Cases, 142, corresponding period, year 1925, 136
India				
Rangoon	Oct 17-30	2	2	
Java				
Batavia	Oct 24-30	8	8	Province
Madagascar				Sept. 16-30, 1926 Cases, 98, deaths, 93
Itasy Province	Sept 16-30	1	1	Bubonic.
Majunga Province	do	9	8	Do
Moramanga Province	do	23	23	Bubonic, 8; pneumonic, 10, septicemic, 5.
Tamatave Province	do	3	3	Bubonic
Tananarive Province—				
Tananarive Town	do	4	3	Bubonic, 1; pneumonic, 2, septicemic, 1
Other localities	do	58	55	Bubonic, 22; pneumonic, 20; septicemic, 16

[1] From medical officers of the Public Health Service, American consuls and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended December 24, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Peru				October, 1926 Cases, 36, deaths, 13
Department—				
Cajamarca	Oct 1-31			Present in the Province of Cajamarca
Lambayeque	do	4	2	Chiclayo Province and district
Libertad	do	8	1	Provinces—Pacasmayo and Trujillo
Lima	do	22	9	Provinces—Canete, Chancay; Huacho, Lima Lima City, cases, 2, deaths, 1, country district—Cases, 7, deaths, 5.
Piura	do	2	1	Province—Huancabamba
Senegal				Nov 1-10, 1926 Cases, 55, deaths, 27 In natives Interior of country
Siam				Apr 1-Oct 30, 1926 Cases, 15; deaths, 10
Syria				
Beirut	Oct 11-20	3		
Union of South Africa				
Cape Province—				
Williston District	Oct 24-30	1	1	On farm Patient in direct contact with previous cases in same family group

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Canada				
Alberta				Nov 21-27, 1926 Cases, 4
Calgary	Nov 21-27	3		
Manitoba				Nov 21-27, 1926 Cases, 2
Winnipeg	Dec 5-11	3		
Ontario				Nov 21-27, 1926 Cases, 34
Saskatchewan				Nov 21-27, 1926. Cases, 21
China.				
Canton	Sept 1-30	1		
Egypt				
Alexandria	Oct 22-28	1		
Cairo	May 14-June 10	17	6	
Great Britain				
England and Wales—				
Sheffield	Nov 14-27	17		
India				
Bombay	Oct 24-Nov 6	8	3	
Calcutta	Oct 3-23	4	9	
Rangoon	Oct 17-23		1	
Italy				
Rome	Aug 30-Sept 5	2		Consular district including Island of Sardinia
Jamaica				Oct 31-Nov 27, 1926 Cases 20. Reported as alastrim.
Java				
East Java and Madura	Oct 10-16	14	2	
Mexico				
San Luis Potosi	Nov 28-Dec 4		2	
Peru				
Arequipa				Sept-Oct, 1926 Present.
Portugal·				
Lisbon	Nov. 14-20	5		
Siam				Oct 24-30, 1926 Cases, 29; deaths, 10 Apr 1-Oct 30, 1926: Cases, 628; deaths, 251
Bangkok	Oct 24-30	8	4	Including 1 death from previous week
Switzerland				
Lucerne				Canton of Lucerne Sept 1-30, 1926 1 case
Union of South Africa·				
Cape Province	Oct 24-30			Outbreaks, occurring in 2 districts
Natal—				
Durban	Oct 24-30	22		In Hindus, contacts with previous cases Total cases, Oct. 16-30, 1926 38, deaths, 8

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended December 24, 1926—Continued

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Palestine				
Jaffa	Nov 2-8	1		
Nazareth	do	1		
Poland				Sept 26-Oct 2, 1926 Cases, 11; deaths, 3 Recurrent typhus fever, 1 case
Union of South Africa				September, 1926 Cases, 48, deaths, 2 Colored
Cape Province				Sept 1-30, 1926 Cases, 24, deaths, 2
Elliot District	Oct 24-30	1		
Orange Free State				Sept 1-30, 1926 Cases, 24
Yugoslavia				October, 1926 1 case

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Senegal (West Africa).				
Kaolak region	Nov 1-10		5	Europeans, 2, Syrians, 3.

Reports Received from June 26 to December 17, 1926 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926 Cases, 31, deaths, 29
China:				
Amoy	Aug. 8-Oct 30	274		Stated to be present in epidemic form
Antung	Aug. 1-31	500		
Canton	June 1-30	38	14	
Do	July 15-31	54	28	
Do	Aug 25-31	30	8	
Changsha	Oct 3-16	2		
Foochow	Aug 15-Oct 2		1	In foreign population
Kulangsu	Sept 12-18		2	
Manchuria—				
Changchun	Aug. 1-31	320		
Dairen	do	10	1	
Harbin	Aug 5-Sept 12	289	83	
Newchwang	Aug 1-31	167		
Nanking	July 25-Oct 2			Present.
Shanghai	Reported July 20	35	8	
Do	July 25-Oct 23	43	420	Cases, foreign; deaths, native and foreign
Swatow	July 11-Oct 16	50	63	
Tsingtao	July 11-Aug 30	4	4	Japanese settlements, 10 deaths, Chinese, 30 to 40 deaths daily, estimated
Do	Oct 10-16			Present
Chosen				
North Heian Province	Sept 3-16	70	30	Deaths estimated
Shingishu	Sept 13	19		Including places in vicinity
French Settlements in India	Mar 7-June 26	31	30	
Do	June 27-Aug. 28	94	83	
India				Apr 25-June 26, 1926 Cases, 18,526, deaths, 11 531 June 27-Oct 9, 1926 Cases, 28,544; deaths, 17,966
Bombay	May 30-June 5	1	1	
Do	July 18-Oct 16	4	4	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	60	
Do	June 27-Sept 25	304	272	
Madras	May 16-June 5	2	1	
Do	Aug. 1-Sept 25	7	6	
Rangoon	May 9-June 26	67	44	
Do	June 27-Sept. 4	31	29	
Indo-China.				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug. 14	31	17	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 17, 1926—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
Japan				To Sept 10, 1926 Cases, 35.
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama.
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Taihoku	Sept 1-10	2		
Wakayama	To Sept 10	2		
Taiwan Island	Sept 21-Oct 10	11		
Philippine Islands				
Manila	Dec 29, 1925-Oct 30, 1926	27	6	
Provinces—				
Albay	Apr 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb 21-Mar 6	3	3	
Pampanga	July 25-31	1	1	
Rizal	July 18-24	1		
Romblon	Dec 14-31	42	43	
Do	Jan 2-Mar 27	41	35	
Siam				Apr 1-Oct 23, 1926 Cases, 7,671; deaths, 5,043
Bangkok	May 2-June 12	1,325	736	
Do	June 30-26	56	26	
Do	June 27-Oct 23	98	68	
Straits Settlements				
Singapore	July 4-17	2	1	
On vessel				
Steamship Macedonia	Aug 5	7		At Yokohama, Japan. Vessel sailed from Singapore July 18, 1926

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria.				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported.
Do	July 1-20	1		
Do	Sept 23	1		
Bona	Aug 14	1		
Oran	Sept. 21-Nov. 13	10	5	
Philippeville	Sept 7	1		
Sfax	Nov 13	7		
Azores.				
Fayal Island—				
Horta	Aug 2-29	2	2	
St. Michaels Island	May 9-June 26	4	1	
Do	June 27-July 10	3	1	
Brazil				
Paranagua	Oct 8			Present.
British East Africa				
Kenya—				
Kisumu	May 16-22	1	1	
Do	Aug 17-Sept 11	3	2	
Uganda	Mar 1-June 30	732	574	
Do	July 1-Aug 31	312	267	
Canary Islands				
Las Palmas	Nov 2	3		Stated to be in locality removed from port.
Teneriffe	Aug. 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Chile				
Iquique	June 20-26		1	
China.				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug 7	28		
Foochow	June 6-July 31			Several cases. Not epidemic.
Nanking	May 9-Oct. 23			Prevalent
Swatow	July 25-31	14		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 17, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Ecuador				January-June, 1926 Cases, 385, deaths, 154
Chimborazo	January-June	9	2	Rats taken, 766
Guayaquil	May 16-June 30	6		Rats taken, 30,914, found infected, 31
Do	July 1-Oct 31	19	3	Rats, taken, 82,774, found infected, 115
Leon	January-June	43	19	Localities, 2
Loja	do	176	75	Cantons, 2
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1,542
Egypt				Jan 1-Nov 4, 1926 Cases, 141.
City—				
Alexandria	July 27-Aug. 12	4	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Beheran	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Minieh	July 24	1	1	
Sidi Barrani	Sept. 30-Oct 21	23	3	In Western desert.
Tanta District	Oct 22-Nov 9	2		
France				
Marseille	July 8	1	1	Reported July 24.
Paris	Oct 18	1		
St. Denis	Reported Aug 2	1		Vicinity of Paris
St Ouen	Aug 14	2		Suburb of Paris
Great Britain:				
Liverpool	Aug 29-Sept 4	2	1	
Greece				
Athens	Apr 1-May 31	16	4	Including Piræus
Do	Aug 1-Sept 30	20	5	Do.
Patras	May 27-June 12	4	1	
Do	July 25-Oct 29	9	5	
Zante	May 17	1		
Hawaii Territory				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Honokaa	Oct 6	1	1	
Paauhau	July 18-24			Plague, infected rat trapped
India				Apr. 25-June 16, 1926 Cases, 53,001; deaths, 41,576 June 27-Oct 9, 1926 Cases, 10,028, deaths, 5,660.
Bombay	May 2-June 26	16	15	
Do	July 18-Oct. 9	13	12	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	162	93	
Do	July 4-Oct 16	1,062	507	
Rangoon	May 9-June 26	20	15	
Do	June 27-Oct. 16	87	75	
Indo-China				
Saigon	May 23-June 26	8	3	
Do	July 18-Aug 7	2	1	
Iraq				
Baghdad	Apr 18-June 12	161	108	
Do	July 18-Sept. 11	4	4	
Japan				
Yokohama	July 2-Aug 10	9	8	
Java				
Batavia	Apr 24-June 19	65	65	
Do	June 26-Oct. 16	89	87	
Cheribon	Apr 11-24	3	3	
Do	Sept 12-18	1	1	
East Java and Madura	June 13-19	1	1	
Do	July 25-Oct 16	1	2	
Surabaya	Aug. 22-Sept. 25	18	2	
Madagascar				
Ambositra Province	May 1 15	4	4	Septicemic.
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Do	Aug 16-Sept. 15	7	7	
Maevatanana Province	do	2	2	
Majunga Province	June 16-30	10	6	
Do	Aug. 16-Sept. 15	57	48	
Mananjary Province	do	1	1	
Moramanga Province	Apr. 1-15	2	2	Do.
Do	Sept 1-15	8	8	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 17, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Madagascar—Continued				
Tamatave Province	Aug 16-Sept 15	17	12	
Tananarive Province				Apr 1-June 30, 1926 Cases, 130, deaths, 120 July 1-Sept 15, 1926 Cases, 175, deaths, 148
Towns—				
Majunga	Aug 1-15	14	10	
Tamatave (Port)	May 16-31	1	1	
Do	July 1-Aug 15	6	5	
Tananarive	Apr 1-June 30	7	7	
Do	July 1-Sept 15	28	28	
Mauritius				
Port Louis	July 31	1	1	
Nigeria				Feb 1-June 30, 1926 Cases, 191; deaths, 163 July 1-31, 1926: Cases, 121, deaths, 112
Peru				May-June, 1926 Cases, 57; deaths, 16 July 1-Sept 30, 1926 Cases, 89, deaths, 52
Departments—				
Ancash	May 1-31			Present
Do	July 1-Sept 30	2		
Cajamarca	May 1-June 30	10	4	
Do	Aug 1-Sept 30	1		
Ica	May 1-31	1		
Do	July 1-31	1		
Junin	Sept 1-30	21	20	
Lambayeque	do	1		
Libertad	May 1-31	4		
Do	Sept 1-30	3	1	
Lima	May 1-June 30	29	12	
Do	July 1-Sept 30	60	31	
Piura	June 1-30	13		
Russia				Jan. 1-Mar 31, 1926 Cases, 37.
Senegal				Nov 1-30, 1925 Cases, 3, deaths, 2 Mar 1-June 30, 1926 Cases, 342, deaths, 213
Siam				Apr 1-Oct 16, 1926 Cases, 15, deaths, 10
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Do	July 4-17	1	1	
Syria				
Beirut	July 1-Aug. 10	2		
Do	Oct 16			Present.
Tunisia	May 11-June 30	174		
Do	July 1-Aug 20	13		
Do	Reported Nov 27	57		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Turkey				
Constantinople	Aug 1-Sept. 25	7	4	
Union of South Africa				
Cape Province	May 16-22	5	3	
Do	Oct 17-23	4	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug 21	3	3	
Hanover District	Oct 10-16	1	1	Native On farm.
Kimberley District	Oct 17-23	2	2	European
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Do	Oct 17-23	3	2	
Orange Free State—				
Hoopstad District	Aug 15-21	1		
Protestpan	May 9-22	3	3	
On vessel				
Steamship Zaria	September, 1926	2	2	At Liverpool, England, from Lagos, Nigeria, West Africa, 29 plague-infected rats found on board

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 17, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				July 21-Sept. 20, 1926 Cases, 230
Algiers	May 21-June 30	14		
Do	July 1-Aug 31	3		
Arabia				
Aden	Oct 3-9	1		Imported
Belgium				Sept 1-30, 1926 Cases, 2
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-Aug 31	16	8	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Oct 23	76	41	
Manaos	Apr 1-30		5	
Para	May 16-June 26	[illegible]	25	
Do	June 27-Oct 30	38	27	
Pernambuco	July 11-Oct 16	230	26	
Porto Alegre	Aug 10-31	2		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept 25	2,734	1,338	
Do	Oct 3-Nov 13	475	300	Jan 1-Oct 16, 1926 Cases, 3,601, deaths, 1,896
Sao Paulo	June 27-Aug 22		5	
Santos	Mar 1-7		1	
British East Africa				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	232	46	
Do	Aug 29-Sept 18	7		
Uganda	Mar 1-May 31	3		
Do	Aug 1-31	1		
British South Africa				
Northern Rhodesia	May 18-24	17	6	Natives
Do	June 8-14	5		
Do	Sept 11-17	1		
Canada				May 30-June 26 1926 Cases, 70 June 27-Nov 20, 1926 Cases, 471
Alberta				May 30-June 12, 1926 Cases 3, June 27-Nov 13, 1926 Cases, 82
Calgary	Sept 5-Nov 22	47		
British Columbia—				
Vancouver	Aug 16-Sept 12	3		
Manitoba				May 30-June 26, 1926 Cases, 15. June 27-Nov. 20, 1926 Cases, 86
Winnipeg	June 6-12	5		
Do	July 4-Dec 4	15		
New Brunswick				Oct 31-Nov 6, 1926 1 case
Northumberland County.	Oct 11-23	1		
Ontario				May 30-June 26, 1926, Cases, 36, June 27-Nov 20, Cases, 178
Fort William	July 25-Aug 7	2		
Kingston	May 23-June 26	5		
Do	July 11-Nov 6	3		
Kitchener	Apr 26-May 29	3	1	
North Bay	May 2-22	5		
Do	July 25-31	2		
Orillia	Apr 26-May 29	7		
Ottawa	July 18-24	1		
Do	Nov 28-Dec 4	1		
Packenham	do	10		
Peterboro	Sept 1-30	10		
Toronto	July 18-Nov 27	46		
Waterloo	July 18-24	6		
Saskatchewan				May 30-June 26, 1926 Cases, 16. June 27-Nov 20 Cases, 124
Regina	July 4-Sept 25	3		
Ceylon				Mar 14-May 29, 1926 Cases, 44; deaths, 3 Sept 12-18, 1926 Cases 2
Colombo	Sept 19-Oct 16	7		
Chile				
Antofagasta	June 6-12	1		
China				
Amoy	May 1-June 26	4	8	
Do	July 4-10	1		
Antung	May 17-June 19	5		
Do	July 4-18	2		
Canton	May 1-31	4	2	
Changsha	Aug. 8-14	1		
Chungking	May 2-Oct. 23			Present.
Foochow	May 2-Oct. 30			Do.
Fushun	Sept 12-18	1		
Hongkong	May 2-June 26	19	10	
Do	June 27-July 3	1	1	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 17, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Manchuria	July 4-31	18		Railway stations
An-shan	May 16-June 12	5		South Manchurian Railway.
Antung	May 16-June 19	5		
Changchun	May 16-June 26	6		Do
Do	June 27-Sept 11	2		Do
Dairen	Apr 26-June 20	69	16	
Do	June 28-Aug. 8	5	3	
Fushun	May 16-June 5	4		Do
Harbin	May 14-June 30	21		Do
Do	July 1-28	12		
Kai-yuan	May 16-June 30	10		Do
Kungchuling	June 13-19	1		Do
Liaoyang	May 16-June 30	4		Do.
Mukden	do	4		Do
Penhsihu	May 16-June 19	4		Do
Do	Aug 8-Oct 3	3		Do
Ssupingnai	May 16-June 30	2		Do
Do	Aug 1-7	1		Do
Teshihchiao	May 16-June 30	2		Do
Tieh-ling	Sept 27-Oct 3	1		
Wa-feng-tien	do	3		Do
Do	Aug 1-7	1		Do
Nanking	May 8-Oct 30			Present
Shanghai	May 2-June 26	10	25	Cases, foreign Deaths, population of international concession, foreign and native
Do	June 27-July 24	3	3	
Do	Oct 3-9	1		
Swatow	May 9-Oct 30			Sporadic.
Tientsin	June 2-26		1	Reported by British municipality
Wanshien	May 1			Prevalent
Chosen				Mar 1-June 30, 1926: Cases, 667, deaths, 146 July 1-31, 1926: Cases, 82; deaths, 27.
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Oct 21	14	7	
Cairo	Jan 29-May 13	39	8	
Estonia				May 1-June 30, 1926. Cases, 3
France				Mar. 1-June 30, 1926. Cases, 141. July 1-Aug 31: Cases, 24.
Paris	Sept. 1-Oct 31	65	18	
St Etienne	Apr 18-June 15	7	3	
Do	Sept 16-30	2	1	
French settlements in India	Mar 7-June 26	282	282	
Do	June 27-Aug. 28	68	68	
Germany				
Coblenz	Oct 24-30	1		
Gold Coast	Mar. 1-June 30	671		
Do	July 1-31	20	1	
Great Britain				
England and Wales				May 23-June 26, 1926 Cases, 933; June 27-Nov. 13, 1926. Cases, 2,415.
Birmingham	Sept 26-Oct 2	1		
Bradford	May 23-29	1		
Do	Aug 29-Sept 4	1		
Hull	Oct 17-23	1		
London	Sept 26-Oct 23	4		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-Nov. 30	7		At Gateshead, several cases reported.
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Nov 13	32		
South Shields	Oct 3-9	1		
Stoke-on-Trent	Nov 7-13	1		
Greece				
Athens	July 1-31	71	6	Including Piræus.
Salonikı	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr 25-June 26, 1926 Cases, 54,851, deaths, 14,771. June 27-Oct 9, 1926 Cases, 27,840; deaths, 8,445.
Bombay	May 2-June 26	220	134	
Do	June 27-Oct. 23	129	72	
Calcutta	Apr 4-May 20	171	152	
Do	June 13-26	24	18	
Do	June 27-Oct 2	45	42	
Karachi	May 6-June 26	44	13	
Do	June 27-Oct. 30	15	7	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 17, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
India—Continued				
Madras	May 16-June 26	7	4	
Do	June 27-Nov 6	80	21	
Rangoon	May 9-June 26	10	5	
Do	July 4-Sept 11	21	4	
Indo-China				
Saigon	May 9-June 26	2		
Iraq				
Baghdad	do	8	3	
Do	July 4-Sept 11	3	1	
Basra	Apr 18-June 22	34	23	
Do	Aug 15-21	1		
Italy				Mar 28-June 26, 1926 Cases, 34
Catania	Aug 9-15	2		June 27-Aug. 7, 1926 Cases, 12
Rome	June 14-20	4		Entire consular district, including island of Sardinia
Jamaica				Apr 25-June 26, 1926 Cases, 201 (Reported as alastrim)
Do				June 27-Oct 30 1926 Cases, 327. (Reported as alastrim)
Japan				Apr 11-June 26, 1926 Cases, 658. June 27-Aug 28, 1926 Cases, 70
Kobe	May 30-June 5	1		
Nagoya	May 16-June 22		1	
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		
Java				
Batavia	May 15-June 25	2		Province
Do	July 24-Oct 16	17		Do
East Java and Madura	Apr 11-July 3	100	6	
Do	July 4-Oct 2	61	3	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Do	July 18-Sept 25	143	8	
Latvia				Apr 1-June 30, 1926 Cases, 5
Mexico				Feb 1-June 30, 1926 Deaths, 1,525
Aguascalientes	June 13-26		5	
Guadalajara	June 8-14		2	
Do	June 29-Sept 27		8	
Mexico City	May 16-June 5	3		Including municipalities in Federal district
Do	July 25-Nov 25	7		Do
Saltillo	July 13-24		1	
San Antonio de Arenales	Jan 1-June 30			Present 100 miles from Chihuahua
San Luis Potosi	June 13-26		7	
Do	July 4-Nov 27		28	
Torreon	May 1-June 30		17	
Do	July 1-Nov 13		16	
Netherlands				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-June 30, 1926 Cases, 521; deaths, 49
Persia:				
Teheran	Apr 21-Aug 23		14	
Peru				
Arequipa	June 1-30		1	
Poland				Mar 28-May 1, 1926 Cases, 12 deaths, 1 June 27-Sept 11, 1926. Cases, 416, deaths, 1
Portugal:				
Lisbon	Apr 26-June 19	10	3	
Do	July 11-Nov 13	36	7	
Oporto	May 23-June 5	4		
Do	July 11-Nov. 6	3	1	
Russia				Jan. 1-Apr 30, 1926 Cases, 2,529
Siam				Apr 1-Oct 23, 1926. Cases, 599, deaths, 241.
Bangkok	May 2-June 12	23	20	
Do	July 4-Oct. 23	79	61	
Spain				Jan. 1-June 30, 1926 Deaths, 99.
Valencia	Aug. 22-Oct. 23	3		
Straits Settlements:				
Singapore	Apr. 25-May 1	1		
Do	July 11-17	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 17, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Sumatra				
Medan	Aug 22-28			1 case varioloid
Switzerland				
Lucerne Canton	June 1-30	1		
Do	July 1-31	2		
Tripolitania	Apr 1-June 30	12		
Tunisia				Apr 1-June 30, 1926 Cases, 17. July 1 Sept 20, 1926 Cases, 38.
Tunis	Sept 11-30	2		
Union of South Africa	June 1-30	8	1	
Cape Province	June 20-26			Outbreaks
Do	Aug 15-21			Do
Idutya district	May 23-29			Do
Natal	May 30-June 5			Do
Durban	Oct 10-23	18		
Orange Free State	June 20-Aug 28			Do
Transvaal				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts
Do	Aug 29-Sept 4	1		Native
Johannesburg	May 9-June 12	5		
Do	July 11-Sept 25	4		
Praetoria	Sept 19-25	1		
Yugoslavia				Apr 15-30, 1926 Cases, 2; deaths, 1
Zagreb	Aug 9-15	2		
On vessels				
S S Karapara				At Zanzibar, June 7, 1926 1 case of smallpox landed At Durban, Union of South Africa, June 16, 1926 1 suspect case landed
Steamship	July 2	1		Vessel from Glasgow, Scotland, for Canada Patient from Glasgow; removed at quarantine on outward voyage.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				July 21-Sept 20, 1926 Cases, 34 deaths, 1
Algiers	May 21-June 30	7	1	
Do	July 21-Aug 31	3		
Argentina				
Rosario	Feb. 1, 28	2		
Bolivia				
La Paz	June 1-30		1	
Do	Aug 1-31	9	1	
Bulgaria				Mar 1-June 30, 1926 Cases, 87; deaths, 14
Chile:				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Do	Oct 1-31			Stated to be present in gaol.
Iquique	Aug 8-Oct 16	1	2	
Valparaiso	Apr. 29-May 5		1	
Do	Aug 14-Nov 6	11		
China:				
Antung	June 14-27	7	1	
Do	June 28-Oct 31	45	1	
Canton	May 1-31	1		
Chungking	Aug 29-Sept 4			Present.
Ichang			1	Reported May 1, 1926 Occurring among troops
Manchuria—				
Harbin	Oct 14-20	1		
Wanshien				Present among troops, May 1, 1926 Locality in Chungking consular district
Chosen				Feb. 1-June 30, 1926 Cases, 1,005; deaths, 112. July 1-31, 1926 Cases, 37, deaths, 6.
Chemulpo	May 1-June 30	38		
Do	July 1-31	7	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Do	July 1-Aug. 31	8		
Czechoslovakia				Jan 1-June 30, 1926. Cases, 156; deaths, 6.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 17, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Egypt:				
Alexandria	July 16-Aug 19	3		
Do	Oct 1-7	1	1	
Cairo	Jan 29-May 13	89	27	
Do	July 23-Aug 5	1		
Port Said	June 4-24	4	1	
Do	July 9-Oct 7	5	1	
France	Aug 1-31	5		
Great Britain				
Scotland—				
Glasgow	July 30-Aug 21	9	1	
Port Glasgow	Reported Dec 10	8		
Greece				
Athens	Sept 1-30		17	Including Piræus
Hungary	May 1-June 30	3		
Iraq				
Baghdad	Oct 10-16	1		
Ireland (Irish Free State)				
Cork	June 5	1		
Cork County	Oct 17-23	1		
Kerry County—				
Dingle	June 27-July 3	1		
Italy				Mar 28-May 8, 1926 Cases, 3
Palermo	Sept 12-18	1		
Japan				Mar 28-May 29, 1926 Cases, 37
Latvia				May 1-June 30, 1926 Cases, 19 Aug 1-31, 1926 Cases, 2
Lithuania				Mar 1-June 30, 1926 Cases, 199, deaths, 22 July 1-Aug 31, 1926 Cases, 23
Mexico				Feb 1-June 30, 1926. Deaths, 189
Durango	July 1-31		1	
Mexico City	May 16-June 5	20		Including municipalities in Federal District
Do	June 13-19	9		Do
Do	July 25-31	3		Do
Do	Aug 15-Nov 20	89		Do
San Luis Potosi	June 13-26			Present, city and country
Morocco				Mar 1-June 30, 1926 Cases, 426 July 1-Aug 31, 1926 Cases, 20.
Norway:				
Stavanger	Sept 6-12	1		
Palestine				Mar 1-June 30, 1926: Cases, 14, deaths, 1 Aug. 1-Oct 25, 1926 Cases, 22.
Birtuvia	Oct 31-Nov 6	1		
Gaza	July 6-12	1		
Haifa	July 13-Aug 30	5		
Halalal	Aug 17-23	1		
Jaffa district	June 15-28	5		
Do	Sept 28-Nov 2	3		
Jerusalem	Sept 14-27	2		
Majdal district	July 13-Aug 2	2		
Nazareth district	July 13-Nov 2	6		
Petah Tokvah	Oct 5-11	3		
Tiberias	Aug 3-9	1		
Yavneil	Aug. 17-23	1		
Persia:				
Teheran	May 23-June 22		1	
Do	July 24-Aug. 23		3	
Peru				
Arequipa	Jan 1-31		2	
Lima	Aug. 1-31	1		
Poland				Mar 28-June 26, 1926 Cases, 1,272, deaths, 85 June 27-Sept 18, 1926 Cases, 204, deaths, 22
Tarnopol district	Oct 10-16	1	1	
Rumania				Mar 1-June 30, 1926 Cases, 899, deaths, 83 July 1-31, 1926 Cases, 65, deaths, 9
Russia				Jan 1-Apr. 30, 1926 Cases, 18,647.
Spain	Jan 1-June 30		13	
Tunisia				Apr 1-June 30, 1926. Cases, 110
Tunis	June 11-30	3		July 1-Sept 20, 1926: Cases, 101
Turkey:				
Constantinople	June 16-22	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 17, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa				Apr 1-May 31, 1926 Cases, 153, deaths, 19
Do				July 1-31, 1926 Cases, 90, deaths, 17
Cape Province				Apr 1-June 30, 1926 Cases, 202; deaths, 24, native July 1-31, 1926 Cases, 58, deaths, 15
Clydesdale	Oct 17-23			Outbreaks
Glengray district	June 27-July 3			Do
Grahamstown	do	1		
Natal			1	Apr 1-June 30, 1926 Cases, 28
Durban	July 25-Sept 18	11		July 1-31, 1926 Cases, 23; deaths, 2
Orange Free State				Apr 1-June 30, 1926 Cases, 24, deaths, 4 July 1-31, 1926 Cases, 7
Brandford district	Oct 10-16			Outbreak on farm
Transvaal				Apr 1-June 30, 1926 Cases, 10; deaths, 5 July 1-31, 1926. Cases, 2 Aug 15-21, 1926, outbreaks
Johannesburg	Aug 29-Sept 4	1		Outbreaks
Walkkerstrom district	June 20-26			Do
Wolmaransstad district	do			Do
Yugoslavia				Apr 15-June 30, 1926 Cases, 48; deaths, 7 July 1-Aug 31, 1926 Cases, 3, deaths, 1.
Zagreb	May 15-21	1		

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
Brazil	Reported June 26			Present in interior of Bahia, Pirapora, and Minas
Bahia	May 9-June 26	10	7	
Do	July 4-10	1		
Gold Coast	Apr 1-June 30	8	4	
Nigeria	June 1-30	1	1	

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PREVALENCE OF DISEASE

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CURRENT WORLD PREVALENCE OF DISEASE

A REVIEW OF THE MONTHLY EPIDEMIOLOGICAL REPORT ISSUED OCTOBER 15, 1926, BY THE HEALTH SECTION OF THE LEAGUE OF NATIONS' SECRETARIAT[1]

Only five of the ports in the Far East, which report to the Singapore Bureau, reported either cases of cholera or deaths from this disease during the two weeks ending October 9, and in nearly all localities in eastern Asia, where cholera was prevalent during the past summer, there was marked improvement in the situation at the end of August or during September according to the data made available in the October Epidemiological Report published by the Health Section of the League of Nations. The table below gives the reports from port towns for the five weeks ending October 9.

TABLE 1.—*Cholera cases reported in the principal maritime towns of the Far East between September 5 and October 9, 1926*

Towns	Weeks ending—				
	September			October	
	11	18	25	2	9
Deaths					
Calcutta	18	9	7	------	14
Madras	0	1	3	0	0
Vizagapatam	1	3	0	0	0
Cases					
Bangkok	7	2	3	0	2
Amoy	53	50	42	23	18
Shanghai	57	66	31	22	6
Antung	0	0	0	2	0
Dairen	3	1	1	0	0
Harbin	27	------	0	0	0

At Shanghai and Amoy a marked diminution in the number of new cases of cholera was shown by the reports for the two weeks ending October 9, and the outbreaks at Harbin and Dairen apparently had come to an end. In southern China, at Hoihow, Hainan, the number of deaths from cholera declined from 410 in the four weeks ending August 1 to 116 in the five weeks ending September 5. Cholera was reported also from Swatow and other parts of the island of Hainan. At Kwang-Chow-Wan, where 483 cholera cases were reported in August, 194 cases were reported from September 1 to 20.

[1] From the Office of Statistical Investigations

"Cholera remained prevalent in Tonkin and Annam in September but disappeared from the remainder of French Indo-China except for a few sporadic cases," says the Report. Cases reported in each Province from June to September are shown in the table below.

TABLE 2.—*Cholera cases reported in French Indo-China, June–September, 1926*

Month	Cambodia	Cochin-China	Laos	Annam	Tonkin
June	521	1,159	0	128	724
July	362	403	7	212	784
August	120	39	32	297	234
September	4	5	0	138	200

The incidence of cholera in Siam has been declining since last May when 2,660 cases were reported. During the four weeks ending September 11, 204 cases were reported as against 674 cases in the previous four weeks

Plague.—Three cases of plague were reported at Constantinople during September and none in other Mediterranean ports during the month Twelve cases occurred in the western desert district of Egypt at Sidi-Barrani between August 19 and September 4, but no cases were reported from any part of Egypt during the remainder of September.

At Beirut, Syria, there were 2 cases of plague on October 11 and another on October 12.

A marked decrease in plague occurred in Senegal during August when only 37 new cases were notified as against 178 in July and 192 in June, the peak month of the outbreak

In Madagascar the number of cases showed an increase during August, and more cases were reported than in August of any previous year. "The disease is, as usual, most prevalent in the Province of Tananarive," states the Report, "but is spreading also elsewhere and especially at Majunga, where 42 cases were reported during the first half of September. Pulmonary and septicemic cases were very common, as is seen from the table below."

TABLE 3.—*Plague cases reported in Madagascar, showing type of disease, July 16 to September 15, 1926*

Date	Bubonic	Pulmonary	Septicemic	Total
July 16-31	2	5	0	7
Aug. 1-15	21	7	2	30
Aug. 16-31	42	32	38	112
Sept 1-15	58	17	12	87

"In India plague was spreading during August in Lower Burma and in the Central Provinces and Berar. Outside of these two areas only a few plague cases were reported. In the ports plague cases were reported in September at Rangoon and at Bombay."

No case of plague was reported in August or September at Kwang-Chow-Wan, where 52 cases occurred in June and July. In French Indo-China there were 3 plague cases in September as against 11 in August Siam reported 6 plague cases in August and only 1 in July.

Plague incidence in Java during the past summer reached the lowest level since 1919. The table below shows that the improvement was general throughout the island with the exception of the Province of Pekalongan, where plague was not very prevalent in 1925 In Surakarta, which was the worst infected Province, a remarkable decline is shown.

TABLE 4.—*Plague deaths reported in Java between June 21 and August 14, 1925 and 1926*

Provinces	1925	1926
Bantam, Batavia, and Preanger	0	0
Cheribon	122	42
Pekalongan	94	150
Semarang	39	1
Banjumas	182	32
Kedu	167	55
Djokjakarta	13	36
Surakarta	631	38
East Java and Madura	8	1
Total	1,256	355

Twenty-one plague cases were reported in Peru in August, nearly all in the Department of Lima. Seven cases were reported at Guayaquil, Ecuador, in the same month. Argentina reported 3 cases in the first week of October, all in inland localities of the Provinces of Cordoba and Chubut.

Yellow fever.—Cases of yellow fever reported were as follows:

TABLE 5.—*Yellow fever*

Localities	Date	Cases	Deaths
Africa:			
Dahomey—			
Porto-Novo	Sept. 10	2	1
Gold Coast	July 1-31	8	3
Nigeria	do	4	3
America:			
Brazil—[1]			
Bahia	May 23-29	1	1
	June 6-19	4	3
	June 20-26	2	1
	July 4-10	1	

[1] Public Health Reports

In the Gold Coast 17 cases had been reported from March to July, more than during either of the previous two years, when 6 and 8 cases were reported in 1924 and 1925, respectively.

Typhus and relapsing fever—Typhus reaches its minimum seasonal incidence in Europe in the late summer, and the disease was little in evidence during August and September. A slight recrudescence

in Poland occurred in September, when 55 cases were reported during the two weeks ending September 18 as against 15 in the previous two weeks.

In Korea, where 118 cases of typhus were reported in June, the incidence declined markedly and only 37 cases were reported in July. No cases have been reported in Japan since May

Typhus has shown a declining incidence in Chile since 1920, and its decline was accelerated during the first half of 1926, when 83 cases were reported, compared with 317 during the corresponding period of 1925.

An outbreak of relapsing fever occurred in Nigeria in June and July and 324 cases with 41 deaths were reported.

Smallpox.—"Smallpox is becoming increasingly rare on the European Continent," says the Report, but "A new increase of smallpox began early in September in England; 443 cases were reported during the four weeks ended October 2, as against 305 cases during the previous four weeks and 119 during the corresponding period last year. The great majority of cases occur, as usual, in northern England, but there have been a few cases also in London and in Middlesex. There was 1 death from smallpox at South Shields and 1 in the suburbs of London during the week ended October 2."

Dysentery.—The usual seasonal rise in the incidence of dysentery occurred in August or September in most of the central European countries. In Germany 887 cases were reported in the four weeks ending September 18 as against 565 in the previous four weeks, but the incidence was no higher than in either of the previous two years. Czechoslovakia reported 206 cases, Hungary 426 cases, and the Kingdom of the Serbs, Croats, and Slovenes 236 cases in August. In Poland 1,310 cases were reported during the four weeks ended September 18, an increase over the 849 cases in the corresponding period of 1925, but not much more than 50 per cent of the 2,303 cases reported in the corresponding weeks of 1924.

In Japan dysentery shows the same seasonal variation common in Europe, and this year the disease has been more prevalent than it was in 1925 In Java bacillary dysentery was reported to be very prevalent in the first quarter of the year, but the incidence subsided during the spring. There were a number of local outbreaks in scattered districts of the island and no general epidemic.

TABLE 6.—*Dysentery cases reported in Japan and Java by four-weekly periods, 1924, 1925, and 1926*

Four weeks ending—	Japan			Java [1]		
	1924	1925	1926	1924	1925	1926
Jan 31	[2] 153	139	174	1,554	347	1,153
Feb 28	[2] 161	116	180	1,136	110	3,000
Mar 28	[2] 192	183	202	493	40	2,733
Apr 25	[2] 265	214	254	218	21	1,215
May 23	[2] 577	289	472	159	62	396
June 20	[3] 676	678	895	180	41	519
July 18	2,179	1,947	1,850	134	24	243
Aug 15	3,021	2,953	3,210	64	12	118
Sept 12	4,013	2,560	3,550	36	60	-------
Oct 10	3,041	2,297	-------	33	162	-------
Nov 7	1,477	1,061	-------	108	163	-------
Dec 4	491	530	-------	122	251	-------
Jan 2	243	302	-------	353	648	-------

[1] Bacillary dysentery only. [2] Data for calendar months. [3] Data for period June 1-20.

Enteric fever.—The report states: "The incidence of enteric fever in European countries in August did not on the whole differ greatly from last year. The situation was more favorable than in August, 1925, in Denmark, Norway, Great Britain, and the Balkan countries. More cases were reported in Poland in August and September than during the corresponding months of 1925. A sudden and severe outbreak of enteric fever occurred in September at Hanover, in Germany, where over 2,000 cases were reported in three weeks. During the two weeks ended September 25, 111 deaths were attributed to enteric fever in the city of Hanover alone. During the week ended August 28 also, 100 cases of 'meat poisoning' were reported at Hanover. The Deutsche Medizinische Wochenschrift states that during that week numerous cases of infectious enteritis occurred at Hanover and were ascribed to the unusually high bacterial content of the drinking water. The bacilli disappeared after chlorination of the water."

In Palestine 421 cases of enteric fever were reported during June and July, compared with 147 cases during the corresponding two months of 1925.

In the United States the incidence was slightly lower than last year. During the four weeks ended September 4, 38 States reported 4,849 cases.

Influenza.—In Mauritius 910 influenza cases and 35 deaths were reported in June; the seasonal maximum is usually in July. Mild outbreaks were reported in July in Basutoland and southern Rhodesia.

New Zealand reported an outbreak of influenza which started in June and reached its maximum in July. During the 12 weeks ending September 6, 117 deaths were attributed to influenza as against 7 during the corresponding period last year.

Acute poliomyelitis—"An unusual prevalence of poliomyelitis was reported in England and Wales, where more cases were notified in August and September than during the corresponding months of any of the previous eight years," says the Report. The highest number of cases was reported in the county of Leicester, where there were 102 cases during the eight weeks ending October 9, and in Essex, where there were 52 cases in the same period.

An extensive outbreak also occurred in Germany, where it seems to have reached its maximum in the first weeks of September. The cases were scattered throughout northern Germany, while Bavaria, Wurtemberg, and Baden were practically free from the disease

TABLE 7.—*Cases of poliomyelitis notified in England and Wales and in Germany in 1925 and 1926*

Four weeks ending—	England and Wales		Germany	
	1925	1926	1925	1926
Jan 31	26	17	17	22
Feb. 28	23	20	28	14
Mar. 28	17	14	21	18
Apr 25	12	14	18	18
May 23	16	17	25	22
June 20	15	23	18	21
July 18	17	26	20	57
Aug 15	28	98	31	160
Sept 12	61	181	57	454
Oct. 10	57	227	53	
Nov. 7	44		45	
Dec. 5	28		37	

Poliomyelitis was much less prevalent in August in the United States than during the previous two years. The disease was also less prevalent in the Scandinavian countries.

Scarlet fever.—Scarlet-fever cases increased in Germany, the Netherlands, and especially in Poland during August and September, and in all three countries the incidence is higher than last year.

TABLE 8.—*Scarlet-fever cases reported in Poland, Germany, and the Netherlands, July 18–October 9, 1925 and 1926*

3 weeks ending—	Poland		Germany		Netherlands	
	1925	1926	1925	1926	1925	1926
Aug. 7	1,151	1,813	1,960	2,182	567	711
Aug. 28	1,200	2,388	2,167	2,812	673	704
Sept. 18	1,511	3,752	2,535	3,756	744	873
Oct 9	1,798		2,965		1,040	1,211

In Poland scarlet fever was reported to be most prevalent in the populous centers and the highest incidence to be among the Jewish population. At Warsaw 14,000 children had been vaccinated against scarlet fever and only 2 cases out of 410 cases reported occurred among those previously vaccinated.

In Germany the disease is most prevalent in east Prussia, Brandenburg, Silesia, Saxony, and the Rhineland; least prevalent in Bavaria and Wurttemberg

Diphtheria.—The incidence of diphtheria in Europe, on the whole, was slightly lower in August and the first half of September than it was last year. A slight increase over last year, however, was indicated in the reports for Poland, Hungary, Kingdom of the Serbs, Croats, and Slovenes, and Bulgaria

In the United States about the same number of diphtheria cases were reported early in September as at the corresponding date last year

Tuberculosis.—The mortality from tuberculosis in a number of large towns during the first half of 1926 is compared with the corresponding rates for 1925 in the following table While the mortality from tuberculosis is usually higher in the first half year than in the second half year, and these rates, therefore, are not representative of the annual rate, they show, nevertheless, that the decline in tuberculosis mortality has continued in nearly all the towns.

TABLE 9.—*Mortality from tuberculosis in various cities during the first half year of 1925 and 1926*

Cities	Population in thousands	1925		1926		Increase or decrease
		Deaths	Rates per 100,000	Deaths	Rates per 100,000	
(a) Tuberculosis, all forms						
Europe						*Per cent*
Lille	201	299	298	227	226	−24.2
Breslau	555	386	139	308	111	−20.1
Dresden	619	418	135	341	110	−18.5
Lyons	562	813	289	669	238	−17.6
Budapest	961	1,631	340	1,378	287	−15.6
Dublin	438	471	215	398	182	−15.3
Tallinn	127	198	312	170	268	−14.1
Berlin	4,014	2,559	128	2,221	111	−13.3
Munich	681	439	129	382	112	−13.2
Edinburgh	427	326	153	285	133	−13.1
Hamburg	1,079	703	130	611	113	−13.1
Oslo	258	230	178	204	158	−11.2
Glasgow	1,057	796	151	720	136	−9.9
Venice	201	234	233	211	210	−9.9
London	4,602	2,652	115	2,399	104	−9.6
Cologne	727	483	133	439	121	−9.0
Prague	713	690	194	642	180	−7.2
The Hague	398	177	89	170	85	−4.5
Rotterdam	552	330	120	316	115	−4.2
Stockholm	439	360	164	346	159	−3.0
Trieste	249	380	305	368	296	−3.0
Genoa	335	389	232	381	227	−2.6
Paris	2,906	4,488	309	4,373	301	−2.6
Thirty Swiss cities [1]	1,176	812	139	804	137	−1.4
Copenhagen	587	354	121	352	120	−0.8
Madrid	783	1,113	284	1,149	293	+3.1
Belfast	415	433	209	472	227	+8.6
Milan	857	685	160	747	174	+8.8
Bologna	221	192	174	217	196	+12.6
Amsterdam	718	352	98	399	111	+13.2
Cracow	187	230	246	285	304	+23.6

[1] In 1925, 26 cities only.

TABLE 9.—*Mortality from tuberculosis in various cities during the first half year of 1925 and 1926*—Continued

Cities	Population in thousands	1925 Deaths	1925 Rates per 100,000	1926 Deaths	1926 Rates per 100,000	Increase or decrease
(a) *Tuberculosis, all forms*—Continued						
America						*Per cent*
San Francisco	558	323	116	303	109	−6 0
Sao Paulo	850	444	104	422	99	−4 8
St Louis	822	312	76	244	59	−2 2
New Orleans	414	400	193	405	196	+1 6
Boston	780	421	109	433	111	+1 8
Chicago	2,905	1,350	90	1,398	93	+3.3
Asia Manila	308	795	516	833	541	+4 8
(b) *Pulmonary tuberculosis*						
Europe, Sofia	154	366	475	444	577	+21 5
America:						
Montevideo	423	780	369	567	268	−27 4
New York	6,252	2,683	86	2,760	86	0
Asia						
Madras [1]	527	653	307	625	294	−4.2
Singapore	396	615	311	663	335	+7 7
Bombay [1]	1,176	516	104	590	118	+13 5

[1] Twenty-two weeks only

Trachoma.—Information on the prevalence of trachoma is shown in the table below:

TABLE 10.—*Trachoma cases reported in various countries, 1924–1926*

Country	Total, 1924	1925 First quarter	1925 Second quarter	1925 Third quarter	1925 Fourth quarter	1926 First quarter	1926 Second quarter
Germany	1,784	487	757	619	914	575	684
Austria	341	175	255	104	293	414	172
Danzig	54	9	11	17	12	11	9
Estonia	528	168	142	76	85	91	81
France	[1] 73	8	29	11	6	12	9
Lithuania	2,375	571	531	372	644	[2] 65	146
Malta	------	89	71	123	259	107	184
Poland	2,954	1,012	1,057	962	1,720	1,400	2,094
Switzerland	13	2	12	1	1	5	4
Czechoslovakia	2,782	651	1,001	760	823	810	1,354
Saar Territory	3	4	0	1	10	1	0
U. S. S. R.:							
Governments and territories in Europe	362,890	139,401	166,602	149,045	105,057	78,210	------
Ukraine	49,592	18,022	17,160	15,874	19,160	23,660	[3] 16,009
Transcaucasia	45,982	4,474	11,326	15,603	14,579	280	------
Siberia	48,158	10,627	10,486	12,216	------	1,561	------
Kirghiz Republic	12,045		21,143			1,037	------
Turkestan	6,648		23,181			------	------
Waterways, railways	648	986	994	614	842	1,590	------
Tunisia	102	24	1	0	0	1	0
United States	3,260	392	487	444	628	316	734
New Zealand	20	10	5	4	10	3	5

[1] Compulsorily notifiable from Apr 1, 1926.
[2] Month of March only
[3] Data for April and May only.

SYNTHESIS AND INDICATOR PROPERTIES OF SOME NEW SULFONPHTHALEINS

By BARNETT COHEN, Chemist, Hygienic Laboratory, United States Public Health Service

Sensitiveness, brilliant color, and general stability place the simpler sulfonphthaleins in the front rank of acid-base indicators. Although a few of these compounds have been known for some time, a fuller realization and utilization of their unique properties as indicators did not appear until Lubs and Clark (1915, 1916) reported some new syntheses, and Clark and Lubs (1916) proposed their selection of indicators for the determination of hydrions. Not only was a useful set of indicators presented by these authors but, as will be shown presently, there was implicit in their data the means for extending and modifying the series almost at pleasure Indeed, given the requisite skill in organic synthesis, it would be no great exaggeration to claim the possibility of producing a sulfonphthalein of any desired apparent dissociation constant (useful indicator range) and of almost any color characteristics, within limitations.

The writer's attention was drawn to the problem specifically by the need for a sulfonphthalein substitute for methyl red (an azo compound) in the Clark and Lubs series Hydrion color standards containing methyl red are notoriously unstable, and the indicator becomes unreliable when used in a biologically active medium, owing, presumably, to more or less reversible reduction and to decompositions. By comparison, the sulfonphthaleins as a class are much more stable. Hence the development of a sulfonphthalein substitute for methyl red would serve two useful purposes—(1) eliminate the unreliable methyl red and (2) render the Clark and Lubs series more uniform chemically.

Analysis of the data of Clark and Lubs led to the decision that di-halogenation of a meta-methyl phenol should produce the desired substitute, and experimental test resulting in the synthesis of tetra-brom-m-cresol sulfonphthalein (brom cresol green) verified this conclusion. Incidentally, a number of other compounds were prepared; and six of them appeared of sufficient value as indicators to merit further study and introduction into the Clark and Lubs series.[1]

The following report includes a description of the synthesis of the new sulfonphthaleins and of their absorption curves in the visible spectrum. The apparent dissociation constants were also determined, and data are presented on the salt and protein errors.

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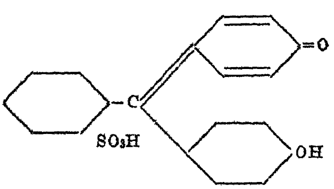
[1] A preliminary report on five of these compounds was made in 1923. Public Health Reports, 38, 199. Circumstances have prevented a more detailed report until now, but in the meantime the essential details for the synthesis of these compounds were made available to all inquirers.

EFFECTS OF SIMPLE SUBSTITUTIONS IN PHENOLSULFONPHTHALEIN UPON IONIZATIONS

Structurally phenolsulfonphthalein is a triphenylmethane derivative containing a sulfophenyl and two phenol radicals, the latter attached in their para positions to the methane carbon.

Rather little is known of the effects of substitution in the sulfophenyl radical upon dissociations in the compound (cf. Lubs and Acree, 1916) The dissociation in the strong sulfonic acid radical occurs in the extreme acid ranges, and theoretical considerations suggest that pronounced changes in the constant of this dissociation should be produced by substitutions in the sulfobenzoic acid nucleus. Consequently, should the need arise for the development of sulfonphthalein indicators for extremely acid regions, this type of substitution would be likely to yield compounds of the required indicator properties.

Although accurate comparative measurements of dissociation constants of the sulfonic acid in the different known sulfonphthaleins are not available, we do know that alkyl substitution in the position meta to the phenolic hydroxyl (such as is found in thymol sulfon-



phthalein and m-cresol sulfonphthalein) suppresses this dissociation greatly, enough at least to enable the employment of these compounds as indicators in the pH region between 1.0 and 3.0.

More useful and definite data are available as to the effects of substitution in the phenolic radicals upon the dissociation of the phenolic hydrion, although many gaps still remain to be filled in. It is this dissociation which determines the zones of color-change of most of the useful sulfonphthalein indicators. Such information as is available will be found in Table 1. The value of the dissociation constant K_a is expressed in terms of pK_a, which equals $\log \frac{1}{K_a}$.

The names in parentheses are the common laboratory names proposed for the unwieldy ones of the more common compounds.

TABLE 1.—*Apparent dissociation constant of the phenolic hydrion in the sulfonphthaleins*

Substituted phenol	pK_a
2-isopropyl-5-methyl phenol (thymol blue)	8. 90
2, 3-dimethyl phenol (xylenol blue)	8. 9?
*2, 6-dimethyl phenol	8 6
*3-methyl phenol (m-cresol purple)	8. 32

Substituted phenol	pK_a
2-methyl phenol (o-cresol red)	8. 20
phenol (phenol red)	7 90
o-iodophenol	6. 6
*o-bromophenol (brom phenol red)	6. 16
*o-chlorophenol (chlor phenol red)	5 98
2, 6-dibromophenol (brom phenol blue)	4. 05
*2-bromo-6-chlorophenol (brom-chlor phenol blue)	3 98
*2, 6-dichlorophenol	4 0?
2, 6-dinitrophenol	3 3?
6-bromothymol (brom thymol blue)	7 10
6-bromo-2, 3-xylenol	7 1?
6-bromo-2-methyl phenol (brom cresol purple)	6. 30
*2, 6-dichloro-3-methyl phenol (chlor cresol green)	4. 8
*2, 6-dibromo-3-methyl phenol (brom cresol green)	4. 67

The compounds marked with an asterisk were synthesized by the author, and, with the exception of the 2, 6-dichlorophenol derivative (tetrachloro-phenolsulfonphthalein) were of sufficient purity to give well-defined dissociation constants. The sample of di-iodo-phenolsulfonphthalein (o-iodophenol derivative) was obtained from the National Aniline & Chemical Co The data for the other compounds were obtained from Brode (1924), Clark, Cohen, and Elvove (1922), and A Cohen (1922, 1923).

A mere inspection of this table discloses the following important facts: Alkyl groups depress the dissociation of the phenolic hydrogen and halogens increase it. Considering the effects of alkyl substitution more in detail, it will be noted that meta-substitution has a greater effect than ortho-substitution, that di-substitution has a greater effect than mono-substitution, and that a combination of ortho plus meta-substitution is more effective than di-ortho substitution. The data are not extensive enough to disclose the effect of the heavier isopropyl group as compared with the methyl.

Mono-halogenation in the ortho position increases the ionization of the phenolic hydrogen in the order, iodo < bromo < chloro. Attempts to prepare meta-halogen sulfonphthaleins have been unfruitful, but should the synthesis be accomplished, it will probably be found that the effect on ionization is rather less than that of ortho-halogenation. In terms of pK_a differences, di-halogenation has twice the effect of mono-halogenation This mode of designating the effects on ionizations is very useful, but the reader should keep in mind that the pK_a differences are direct functions of differences between the *energies* of ionizations and not between the *magnitudes* of the dissociation constants.

Rather noteworthy is an apparent reversal in the order of effect upon ionization of the phenolic hydrion by chlorine and bromine in di-ortho halogenation on the one hand and tetra-ortho halogenation on the other. In phenolsulfonphthalein, dichlorination produces a

greater effect than dibromination; and while this effect seems to be only diminished (but not reversed) in tetra-chlor- and tetrabromphenolsulfonphthaleins, we find in the case of m-cresolsulfonphthalein that tetra-bromination has a greater effect than tetra-chlorination.

Analogous effects of approximately the same magnitude were found among the indophenols by Cohen, Gibbs, and Clark (1924a). Their data are reproduced here for purposes of comparison, because the parallelism with the sulfonphthaleins is instructive

Indophenol system	pK_a
carvacrol indophenol	8.8
thymol indophenol	8.7
m-cresol indophenol	8.5
o-cresol indophenol	8 4
phenol indophenol	8 1
m-bromophenol indophenol	7.7
o-bromophenol indophenol	7.2
o-chlorophenol indophenol	7 0

The effects of alkyl substitutions in both the indophenols and the sulfonphthaleins are almost identical. The papers by Cohen, Gibbs, and Clark (1924b) and by Gibbs, Cohen, and Cannan (1925) contain additional information of possible value in predicting the effects of substitution upon ionization of the phenolic hydrion in the sulfonphthaleins and perhaps other systems.

The effect of substitution on the dissociation of the phenolic hydrogen may be visualized somewhat as follows: If a group (or groups) substituted for hydrogen in the phenol nucleus pulls electron pairs toward itself more than the dissociable hydrogen pulls electron pairs toward itself, the escaping tendency of an electron pair should be lowered at least in the immediate neighborhood. This should become evident in an increased ionization of the hydrogen. The converse of this effect should occur if the substituent group tends to repel electron pairs. If alkyl groups be considered repellant and halogen attractive the effects would be those found here.

The dissociation constants of the ionizable groups depend on three factors—(1) the nature of the groups, (2) the influence of other groups, and (3) the effect of electrostatic forces between the ionizing groups. The nature of the groups determines the general order of magnitude of each constant. The other two factors have an influence dependent upon conditions. Each substituent produces an effect upon an ionizable group dependent upon the nature of the substituent and its position. In addition, work is expended in the liberation of the dissociable hydrogen from the electrostatic attraction of the charge or charges on the rest of the molecule.

The complete formulation of all these factors appears to be hopeless at the moment, but some promising attempts in this direction are being made (cf. Simms, 1926).

The above rather incomplete summary regarding the effects of substitution on ionization in the sulfonphthaleins was only partly available at the time we decided to seek the substitute for methyl red, but enough of it was implicit in Clark and Lubs' data to point the way.

Knowing approximately the magnitude and the direction of shift in pK_a value caused by introduction of halogen or methyl groups in the phenol nuclei of the phenolsulfonphthalein molecule, it was deduced that a tetra-halogenated m-cresolsulfonphthalein should have a pK_a value close to that of methyl red. Experimental test verified our deduction and resulted in the synthesis of m-cresol purple (pK_a 8 32) and brom cresol green (pK_a 4 67). The latter was proposed as a substitute for methyl red (pK 5.0). Since then chlor cresol green (pK 4 8) has been added. The useful pH ranges of these indicators are given below.

Methyl red	4. 4–6. 0
Chlor cresol green	4 0–5. 6
Brom cresol green	3. 8–5 4

Although these ranges are not identical, they are sufficiently close for practical indicator use; for it is well known that skillful manipulation of conditions permits accurate colorimetric readings beyond the "limits" of the useful ranges. In actual practice we have found that the new indicators can function as adequate substitutes for methyl red.

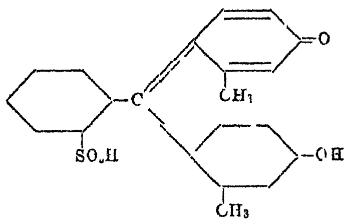
EXPERIMENTAL

m-Cresolsulfonphthalein.—A preliminary report by B. Cohen (1923) was the first announcement of the synthesis of this compound. While the present paper was in preparation there appeared the paper by Orndorff and Purdy [2] (1926) giving a competent elucidation of the chemistry of m-cresolsulfonphthalein.

Orndorff and his associates have shown that the condensation of a phenol with the anhydride of sulfobenzoic acid takes place in two stages, there being first formed an addition product, the intermediate acid, which then reacts with a second molecule of the phenol to give the sulfonphthalein. This process also takes place in the

[2] Orndorff and Purdy, referring to the preliminary report by B. Cohen (1923), state that the latter gave no details as to the method of preparation or the properties of these sulfonphthaleins (m-cresolsulfonphthalein and its tetrabromo derivative), nor were any analyses given. While this statement is correct, these authors appear to have unintentionally overlooked an exchange of letters between Orndorff and Cohen in 1923, in which Cohen responded to a request for information and gave the following essential facts: (1) m-cresol sulfonphthalein was made by condensation of m-cresol with sulfobenzoic acid anhydride at a temperature not exceeding 110° for 10 hours, (2) purification was obtained by dissolving the crude dye in an alkaline medium of about pH 10 to 11, filtering and reprecipitating with acid; (3) slow crystallization from approximately normal HCl or H_2SO_4 yields well-formed crystals with a metallic luster, and (4) analysis of the brominated product had shown it to be the tetra-brom product.

synthesis of m-cresolsulfonphthalein which possesses the following structure:



m-Cresol.—The m-cresol was obtained from Eastman (m-cresol, "practical") and was redistilled before use. The distillate boiled between 200–201° (755 mm.).

o-Sulfobenzoic acid anhydride.—This was made according to the method of White and Acree (1919) from saccharin. It was crystallized out of benzol, and retained a strong odor of benzol. The presence of the benzol was found to be not detrimental.

Condensation of m-cresol with o-sulfobenzoic acid anhydride.—The process must be carried out at a temperature below 110° if m-cresolsulfonphthalein is to be obtained. This has been confirmed by Orndorff and Purdy, who find that higher temperatures favor the formation of dimethylsulfonfluoran, the anhydride of the di-ortho compound. No particular advantage was noted in the employment of condensing agents like zinc chloride so far as improvement in the yield is concerned. The yield is low, between 15 and 20 per cent at the best, and is probably due to a retardative effect exerted by the meta-methyl group.

Crystalline o-sulfobenzoic acid anhydride, 30.8 gm., was added to 36.2 gm. of dry, redistilled m-cresol which had been warmed to 110°. The mixture was stirred and held for six hours in a bath kept at a temperature of 106°. The compound formation was followed by observing the amount of color produced by a test drop in 10 per cent sodium carbonate solution and in dilute acid. The fusion was terminated when color reached a maximum. The mixture was then steam distilled to remove m-cresol. Solid sodium carbonate was then added carefully to the hot solution until the color became deep purple. The solution was allowed to stand overnight to cool and settle out. It was filtered, the precipitate was discarded, and to the filtrate was slowly added concentrated hydrochloric acid until a deep red color developed. This solution was evaporated on the water bath under reduced pressure. Uniform, small green crystals of the sulfonphthalein separated as evaporation progressed. The crystalline product may be washed with cold water to remove adherent acid and salt, and is sufficiently pure (over 95 per cent) for ordinary indicator purposes. The yield up to this point was 12 gm., or about 19 per cent. The residues contain a considerable amount

of coloring matter, but attempts to recover more of the crystalline m-cresolsulfonphthalein from them have not been profitable. Purification is easily effected by dissolving the crystals in hot sodium carbonate solution, filtering, acidifying, and recrystallizing as above by evaporating the solution under reduced pressure.

Analyses.[3]—The air-dried crystals contained from 1 to 3 per cent cent of moisture The material dried to constant weight at 110° gave the following analyses for sulfur. Substance, 0.1500, 0.1500, 0.1500; $BaSO_4$, 0 0891, 0 0903, 0 0911. Calculated for $C_{21}H_{18}O_5S$, S, 8 39 per cent Found, 8 16, 8 27, 8.34 per cent. The compound has no definite melting point. It darkens and contracts at 230° and carbonizes at higher temperatures.

Indicator properties—m-Cresolsulfonphthalein is a brilliant acid-base indicator, and the common name we have suggested for it is *meta-cresol purple* Like the other sulfonphthaleins, it exhibits two distinct sets of color changes corresponding to the dissociations of the sulfonic acid and the phenolic hydrion, respectively. Unlike most sulfonphthaleins, however, its sulfonic acid dissociation (pK_a 1.51) is sufficiently repressed to make it useful as an indicator of acidity in the pH range 1.2 to 2.8, the corresponding color change being from red to yellow. This pH range and virage are identical with those of thymol sulfonphthalein in the Clark and Lubs series.

It has been found, however, that hydrion color standards of thymol blue in the acid range tend to fade with time[4]

Since addition of alkali does not regenerate the faded color of thymol blue, it would seem that the loss of color is due to a decomposition rather than to a mere agglomeration of the dye by the high acidity. Under strictly comparable conditions, hydrion color standards containing meta-cresol purple do not suffer the disadvantage of this slow fading. (It is important to emphasize that the color fading we are now discussing is a slow one, being a matter of days or weeks, and does not affect the ordinary use of thymol blue).[5] We discover, therefore, in meta-cresol purple a brilliant and stable indicator of acidity in the pH region 1.2 to 2.8.

The second color change in meta-cresol purple is from yellow to purple in the pH region 7.4 to 9.0, corresponding to the dissociation (pK_a 8.32) of the phenolic hydrion. In this zone this indicator shares with the other purple indicators the disadvantage of dichromatism, which interferes with the accurate matching of colors. The spectrophotometric data and measurements of the dissociation constants, salt, and protein effects are given in a later section.

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[3] I am indebted to Chemist Elias Elvove and Assistant Chemist C. G. Remsburg not only for the final analyses presented in this paper but also for numerous preliminary analyses controlling the steps in purification.

[4] This has also been noted by Dr W. A Taylor, of the LaMotte Chemical Co, Baltimore, who now proposes the use of meta-cresol purple as a substitute for thymol blue in the acid range.

[5] Holmes and Snyder (1925a) found this change to be appreciable spectrophotometrically within 24 hours.

Tetrabrom-m-cresol sulfonphthalein (*Brom cresol green*).—The synthesis of this compound was first announced in the preliminary report of B Cohen (1923). It is briefly described by Orndorff and Purdy (1926). A solution of 25 gm. of bromine in 150 c. c. glacial acetic acid was added slowly to a suspension of 15 gm m-cresol sulfonphthalein in 150 c c. glacial acetic acid. The mixture was stirred and not allowed to heat above 30°. At intervals a drop was tested in buffer of pH 7 When the blue color reached a maximum residual bromine was removed by aeration The mixture was then poured into 300 c c water and solid sodium bicarbonate was added until the solution turned definitely green. This was allowed to stand overnight and then filtered. Hydrochloric acid was then added and the solution evaporated. As the acetic acid evaporated off the product separated as a dark, reddish-brown amorphous mass. This material on recrystallization from glacial acetic acid gave a light yellowish product which melted at 217–218° (corr).

Analyses —Several lots of the compound dried to constant weight at 110° yielded the following analyses for sulfur and bromine: Substance, 0.3565, 0.2277, 0.1910, 0 2570; $BaSO_4$, 0 1185, 0.0765, 0.0623, 0.0817; substance, 0.1650, 0.1810, 0.1932, 0.2228; AgBr, 0.1780, 0.1933, 0.2175, 0.2543. Calculated for $C_{21}H_{14}$ Br_4O_5S; S, 4.59 per cent; Br, 45.80 per cent. Found, S, 4 56, 4.62, 4.48, 4 36 per cent; Br, 45.91, 45 45, 45.05, 46.09 per cent.

Indicator properties.—Tetrabrom-m-cresolsulfonphthalein is the compound proposed by B Cohen (1923) as a substitute for methyl red, and the common name proposed for it is *brom cresol green.* It is far more stable in solution than methyl red, and its color changes are distinct. Brom cresol green may be used in the colorimetric determination of hydrion concentration in bacterial cultures to the same extent as the other sulfonphthaleins, although it should be remembered that even these rather stable indicators may be attacked by very active species. Hydrion color standards containing brom cresol green remain unaltered under proper conditions for long periods The color change associated with the ionization of the phenolic hydrion is from yellow to blue (corresponding to the pH zone 3.8 to 5.4), the color at the midpoint, pK_a 4.67, being green. Owing to this moderately high dissociation, brom cresol green gives in ordinary tap water the characteristic blue color of the fully dissociated dibasic salt; and for the same reason this indicator is practically insensitive to CO_2.

The spectrophotometric data and measurements of the dissociation constants, salt, and protein effects are given in a later section.

Tetrachlor-m-cresolsulfonphthalein (*Chlor cresol green*).—Pure m-cresolsulfonphthalein, 8 gm., was suspended in 175 c. c. glacial acetic acid and was chlorinated by bubbling commercial tank chlorine

through the suspension. The subsequent procedure was substantially the same as in the preparation of the tetrabrom derivative The tetrachlor product was finally recrystallized from glacial acetic acid, from which it separated out in small, brown, velvety tufts, melting at 200–201° (corr). On analysis it was found to contain 6 1 per cent S and 27 0 per cent Cl; calculated for $C_{21}H_{11}Cl_4O_5S$, 6 17 per cent S, 27 27 per cent Cl.

Except for a determination of the pK_a by the Salm method, no very detailed examination of the compound was made, hence the data here given should be regarded as only approximate The original purpose in preparing the compound was to determine the effect of tetrachlor substitution as compared with tetrabrom upon the dissociation of the phenolic hydrion

The pK_a of the tetrachlor derivative was found to be 4.8, and we have seen above that in the tetrabrom compound it is 4 67 The color change in both compounds is the same, from yellow to blue, but the pH ranges are slightly different, corresponding to the differences in pK_a values The pH range of chlor cresol green is 4 0 to 5.6, a slightly closer approach to the range of methyl red than is given by brom cresol green

Dibrom-phenolsulfonphthalein —In the colorimetric determination of hydrion concentration, a matter of minor importance but yet of great convenience is the color of the indicator itself, a factor which is determined by the nature of the solution as well as by the physiology and psychology of color perception. We may encounter amongst apparently normal persons a greater ease in distinguishing color gradations in the reds than in the blues, and vice versa. Another factor of still greater importance in this connection is the dichromatism especially of the purple indicators, which introduces real difficulties in the accurate matching of colors

The elimination of such troublesome indicators is greatly to be desired if adequate substitutes can be found. In the Clark and Lubs series brom cresol purple and brom phenol blue are the chief offenders, and we have succeeded in producing an excellent substitute for the former in *brom phenol red* (dibrom-phenolsulfonphthalein) which is a clear red in solutions where brom cresol purple is either blue or red, according as the liquid layer is thin or thick

Brom cresol purple has a pK_a value of 6 3, and from the fact that tetra-brom phenolsulfonphthalein has a pK_a of 4 05 while that of phenolsulfonphthalein is 7 90, it is to be expected that the dibrom compound should have a pK_a about midway between these two and therefore approximately that of brom cresol purple.

In addition it was expected that the color of the new compound in alkaline solution would show more of the red of phenol red and less

of the blue of brom phenol blue This was deduced from the fact that halogenation in the sulfonphthaleins tends to introduce a blue component in the color of the unhalogenated compound. Thus, tetrabrom-phenolsulfonphthalein is blue while phenolsulfonphthalein is red, dibrom-o-cresolsulfonphthalein is purple while o-cresolsulfonphthalein is red, and dibrom-thymolsulfonphthalein is blue while thymolsulfonphthalein is purplish blue This deduction was confirmed, but the elimination of the blue component occurred to a greater degree than was expected, for the alkaline color of dibrom-phenolsulfonphthalein exhibits only a slight suggestion of blue.

Sohon (1898) describes the synthesis and properties and gives analyses of a compound alleged to be dibrom-phenolsulfonphthalein We find that although his analyses correspond to such a compound, the properties described are those of tetra-brom-phenolsulfonphthalein and the method of synthesis yields the tetra-brom product and nothing else. We are unable to account for the apparent discrepancy

When phenolsulfonphthalein is brominated in glacial acetic acid (the method followed by Sohon) there results tetrabrom-phenolsulfonphthalein, and when the bromination is incomplete the result is a mixture of the unbrominated and tetra-brominated compounds. Analogous effects are produced by chlorination.

We have prepared the dibrom compound and found it to possess properties distinct from the tetra-brom. Moreover, we have confirmed its identity by brominating it and producing the tetra-brom derivative The change in pK value of the successively brominated derivatives furnishes independent confirmatory evidence

Synthesis.—The o-bromophenol employed came from two sources—some was prepared in this laboratory and some was purchased from Eastman Kodak Co. Thirty-four grams of o-bromophenol was heated to 140° and 18.1 grams o-sulfobenzoic acid anhydride was added and stirred in. The mixture was kept in an oil bath at 140° for about 10 hours, or until a test drop showed maximum color production. Water was then added and the mixture steam distilled to remove residual bromophenol. Solid sodium bicarbonate was then cautiously added until the solution was a deep bluish red. After standing overnight the solution was filtered. The filtrate was poured slowly into 20 per cent hydrochloric acid and the compound separated out in bright red granular masses. On standing the material assumed a crystalline form with a greenish lustre.

The product is surprisingly soluble in water. It was therefore thoroughly washed with dilute hydrochloric acid, dried over stick sodium hydroxide, and heated in the oven to remove adherent hydrochloric acid. The mother liquor contained a considerable proportion of the compound, which was recovered by evaporation and extraction

with n-butyl alcohol The purified dibrom-phenolsulfonphthalein, recrystallized from glacial acetic acid, melted at 230° (corr)

Analyses—Substance, 0 2538, 0 1587, $BaSO_4$, 0 1159, 0.0713; substance, 0 1500, 0 1500, AgBr, 0 1100, 0 1104 Calculated for $C_{19}H_{12}O_5SBr_2$. 6.26 per cent S and 31 21 per cent Br. Found, 6.27, 6 17 per cent S, and 31 21, 31 32 per cent Br.

Indicator properties—Dibrom-phenolsulfonphthalein, *brom phenol red* for short, has the brilliant indicator properties characteristic of the sulfonphthaleins It is soluble in water to the extent of at least 0 2 per cent, yielding a golden yellow solution In strongly acid solution it gives an orange-red color, in intermediate zones the color is yellow, and in alkaline solution it is deep red Its useful range for the colorimetric determination of hydrions is between pH 5.2 and 6 8, corresponding to a pK_a of 6 16 Brom phenol red is an almost perfect substitute for brom cresol purple and is free from the disturbing property of dichromatism

Purified brom phenol red appears to be perfectly stable, but we have noted in the case of some of our crude preparations a certain amount of fading This tendency was eliminated by purification of the material In this connection it is interesting to note that we found a specimen, labeled brom phenol red and sent to us for examination, to have the properties of phenol red and not of brom phenol red. This has also been encountered by Rous (1925). These, may however, be merely cases of accidental mislabeling.

In this connection it is possible that the fading of acid solutions of thymol blue, which we have previously discussed, may be due to impurities in that compound

Dichlor-phenolsulfonphthalein.—This compound was made in order to determine the effect of dichlor substitution as against dibrom substitution on the ionization of the phenolic hydrion in the corresponding sulfonphthaleins.

Synthesis—o-Chlorophenol was the starting material. Both the Eastman product and material prepared in this laboratory were used. Thirty-two grams of dry o-chlorophenol was heated to 130° and 23 grams crystalline o-sulfobenzoic acid anhydride was stirred in. The mixture was heated for six hours at 130°, or until a test drop showed maximum color formation. Water was then added and the mixture steam-distilled to remove residual chlorophenol. Sodium bicarbonate was then carefully added until the color became a deep bluish red, and the solution was allowed to stand overnight before filtering Concentrated hydrochloric acid was added to the filtrate until a precipitate formed. This was filtered off and washed with dilute hydrochloric acid. Water can not be used for washing because of the solubility of the compound. The mother liquor was evaporated and a second crop of crystals was obtained. The adherent moisture

and hydrochloric acid may be driven off with heat. The crystals are very small and are of dark green color with a reddish tinge, and when ground the material is dark red. When recrystallized from glacial acetic acid it yields a product melting at 261–262° (corr.).

Analyses.—Substance, 0.1500, 0.1500; $BaSO_4$, 0.0810, 0 0815; substance, 0 1500, 0.1500; AgCl, 0 1017, 0 1020. Calculated for $C_{19}H_{12}O_5SCl_2$, 7.58 per cent S and 16.76 per cent Cl. Found, 7.42, 7 46 per cent S, and 16 77, 16 82 per cent Cl

Indicator properties—Dichlor-phenolsulfonphthalein, *chlor phenol red* for short, is very similar to brom phenol red in solubility and in indicator properties Its alkaline color is a deep red with even less of a bluish cast than is seen in brom phenol red. The alkaline color of a commercial specimen of the corresponding di-iodo compound was found to be decidedly purplish. We see, therefore, that increasing weight of the halogen substituent tends to introduce an increasing amount of blue in the colors of the corresponding compounds.

The useful range of chlor phenol red for the colorimetric determination of hydrions is between 4.8 and 6.4, corresponding to a pK_a of 5 98. Chlor phenol red overlaps the range of brom cresol green on the one hand and of brom thymol blue on the other. Consequently, both methyl red and brom cresol purple, two objectionable compounds as above indicated, may be eliminated from the Clark and Lubs series of indicators without leaving a gap.

Dibrom-dichlor-phenolsulfonphthalein (Brom-chlor phenol blue).—By brominating dichlor-phenolsulfonphthalein or chlorinating the dibrom compound it is possible to obtain a dibrom-dichlor derivative. It was of interest to obtain this compound and compare its properties with those of the tetrabrom and tetrachlor derivatives.

Synthesis.—Dichlor-phenolsulfonphthalein was brominated in glacial acetic acid at room temperature The bromination was terminated when a test drop showed maximum development of purple-blue color in alkaline solution Residual bromine and hydrobromic acid were removed by aeration. Water was added and then solid sodium bicarbonate until the yellow color changed to a deep wine red. The solution was filtered after settling overnight, and to the filtrate was added concentrated hydrochloric acid. The compound separated out as a dark brown precipitate. The mother liquor was evaporated under reduced pressure, and a second crop was obtained. The material was recrystallized from benzol and glacial acetic acid, yielding a flesh-pink powder melting at 250–251° (corr.).

Analyses.—Substance, 0.2000, 0.2000; $BaSO_4$, 0 0778, 0.0752; substance, 0.2000; AgBr 0 1271; AgCl, 0 1013. Calculated for $C_{19}H_{10}O_5SBr_2Cl_2$, 5.52 per cent S, 27.51 per cent Br, 12.21 per cent Cl. Found, 5.31 and 5.16 per cent S, 27.05 per cent Br, 12.53 per cent Cl.

Indicator properties.—Dibrom-dichlor-phenolsulfonphthalein, *bromchlor phenol blue* for short, is very similar to brom phenol blue in indicator properties It imparts a yellow color to mineral acid solutions of around 0 01N and a purplish blue to more alkaline solutions, in which is exhibited the troublesome dichromatism shared by brom phenol blue. Its useful range for the colorimetric determination of hydrions is between pH 3 0 and 4.6, corresponding to a pK_a of 3.98 for the ionization of the phenolic hydrion

Comparing the pK_a values of the tetra-brom compound (4 05) and the dibrom-dichlor compound (3.98), we note that the effect is only a relatively slight increase in ionization of the phenolic hydrion when two bromine atoms are replaced by two chlorines From this it may be inferred that the pK_a value of the tetra-chlor derivative will be shifted still further and to the same slight degree A crude specimen of tetrachlor-phenolsulfonphthalein was prepared (but not purified or analyzed) and its pK_a value, as determined by the Salm (1906) method, was found to be about 4 0

Xylenol-sulfonphthaleins —Xylenol blue, made from 2, 3-dimethyl phenol has been synthesized by A. Cohen (1922). Its pK_a value is approximately 8.9, like that of thymol sulfonphthalein. It is to be expected that the compound made with 2, 5-dimethyl phenol will have approximately the same dissociation constant for the phenolic hydrion. On the other hand, the compound made with 2, 6-dimethyl phenol should show a lower pK_a value because of a lesser suppression of the phenolic ionization by o-methyl substitution as compared with m-methyl substitution. By the same reasoning, the compound made with 3, 5-dimethyl phenol (symmetrical m-xylenol) should show a much higher suppression of ionization of the phenolic hydrion (pK_a about 9.5).

We did not have available any 2, 5-dimethyl phenol for confirming the one aspect of our predictions, but 2, 6-dimethyl phenol[6] and 3, 5-dimethyl phenol were available We found that condensation of 2, 6-dimethyl phenol with o-sulfobenzoic acid anhydride yielded a sulfonphthalein similar in indicator properties to xylenol blue and having a pK_a of 8.6 The compound (2, 6-xylenol sulfonphthalein) crystallized in beautiful, reddish bronze masses melting at 253–254° (corr). No analyses were made. The behavior of this compound confirmed our prediction.

However, numerous attempts to prepare the symmetrical xylenol derivative were unsuccessful Pure 3, 5-dimethyl phenol was prepared by the Knoevenagel reaction from ethyl aceto-acetate according to the method described by Gattermann (1923). The *sym*-xylenol was condensed in a variety of ways with the sulfobenzoic acid anhy-

[6] We are grateful to Dr L H Marks, of the National Aniline & Chemical Co., who supplied us with a pure specimen of this compound

dride, but no sulfonphthalein was obtained. We have already seen that the yield on condensing m-cresol with the anhydride is very low, and it would seem that the presence of two meta-methyl groups completely hinders the condensation to a sulfonphthalein by the ordinary procedure Some other method of synthesis will have to be devised to produce this compound, and when it is accomplished we believe our prediction as to its pK_1 value will be verified.

SPECTROPHOTOMETRIC MEASUREMENTS

Measurements in the visible and ultraviolet ranges of the spectrum made by Orndorff, Gibbs, Scott, and Jackson (1921) have shown that the sulfonphthaleins in neutral aqueous solution have two absorption bands The addition of either acid or alkali results in the disappearance of one of the bands and the appearance of two new absorption bands, one on each side of the position of the band that disappears The other band of the neutral solutions seems to be modified by the addition of acid, but with the addition of alkali it also disappears and a new band with lower frequency appears In the case of dilute alkaline solutions the new type of absorption is not stable but reverts more or less rapidly to the two absorption bands found in the corresponding neutral solution These changes and reversions indicate that in the neutral aqueous solutions the carbinol and hydrate forms of the sulfonphthalein are present and that on the addition of either acid or alkali a salt having a quinoid structure is formed.

The absorption curves of aqueous solutions of most of the new sulfonphthaleins were determined in the visible region with a Keuffel & Esser, Model E, direct reading color analyzer, employing tubes 10 cm. long. The wave-length scale was graduated to 5 millimicron intervals and the photometer in unit steps from zero to 100.

A stock aqueous solution was prepared containing 0.04 per cent of the indicator plus one equivalent of NaOH. The solution was diluted 1:9 with water, and this dilution was further diluted 1:19 with acid, alkali, or the required buffer (as indicated below) to produce complete color transformation and to permit viewing through a 10 cm. thickness of solution The final concentration of indicator was 2 0 mg. per litre, except as noted in certain cases The measurements were carried out at 30°.

The peaks of the absorption bands were found to be at the following wave lengths (1 $m\mu = 10^{-6}mm = 10$ Angstrom).

	$m\mu$
Meta-cresol purple (acid range)	533
Meta-cresol purple (alkaline range)	580
Brom cresol green	617
Chlor cresol green	612
Brom phenol red	574
Chlor phenol red	573
Brom-chlor phenol blue	596

We found the absorption peak of brom phenol blue to be at 593mμ, which is in fair agreement with the value (592mμ) found by Brode (1924). For brom cresol green, Holmes and Snyder (1925b) report the peak at approximately 614mμ, and we find it near 617mμ.

The absorption curves in the visible spectrum are shown in the accompanying charts (fig 1) and the experimental data in Table 2. The absorptions are given in terms of $-\log_{10}$ transmittancy ($-\log_{10}T$), which is identical with the product of the thickness, concentration, and the specific transmissive index, k. (cf. Gibson et al., 1922)

m-Cresol purple—The full acid color was developed in conc HCl, the neutral color in Clark and Lubs' phthalate buffer of pH 4 6, and the alkaline color in N/5 NaOH.

Brom cresol green, chlor cresol green, brom phenol red—The full alkaline colors were developed in Clark and Lubs' borate buffer of pH 10 The concentration of brom phenol red was 1 6 mg. per liter.

Chlor phenol red—The full alkaline color was developed in N/5 NaOH

Brom-chlor phenol blue—The full alkaline color was developed in Clark and Lubs' borate buffer of pH 9 2

TABLE 2—*Absorption values in the visible spectrum (—log transmittancy)*

Wave length in mμ	m-cresol purple			Brom cresol green	Brom phenol red	Chlor phenol red	Brom-chlor phenol blue	Chlor cresol green
	Acid range in conc HCl	Neutral range in buffer pH 4 6	Alk range in 0 2 N NaOH					
700	---------	---------	---------	0 039	---------	---------	---------	---------
690	---------	---------	---------	.061	---------	---------	---------	0 000
680	---------	---------	0 000	.140	---------	---------	---------	041
670	---------	---------	018	252	---------	---------	0 000	119
660	0.000	---------	.022	.403	---------	---------	.022	.194
650	004	---------	071	.620	0 000	0 000	.041	314
640	009	---------	131	878	013	013	.066	458
630	013	0 000	222	1 076	027	.018	201	620
620	018	013	377	1 122	051	.081	553	708
610	027	013	585	1 094	.155	237	1.187	744
600	041	018	854	991	482	620	1.602	713
590	092	022	1 046	.870	.979	1 284	1 668	668
580	155	.025	1 097	.739	1.372	1 048	1 448	588
570	519	.026	1 071	.602	1 398	1.668	1 260	523
560	.569	.027	959	.498	1 222	1 462	1 046	446
550	921	.036	.824	.415	1.018	1.252	903	369
540	1.181	.051	699	.337	.854	1 046	.710	319
530	1 301	.071	.577	.244	678	.886	538	244
520	1.097	.097	475	.174	538	.683	432	194
510	921	.137	372	.114	398	.530	.314	.119
500	620	.187	297	076	319	.409	.208	092
490	.469	.222	.237	.046	---------	.328	.174	.056
480	.347	.292	.155	---------	194	.220	119	046
470	244	367	.143	---------	---------	.174	.092	022
460	149	.432	119	---------	097	.131	046	---------
450	125	.444	.032	---------	---------	.102	000	---------
440	---------	.469	000	---------	---------	.027	---------	---------

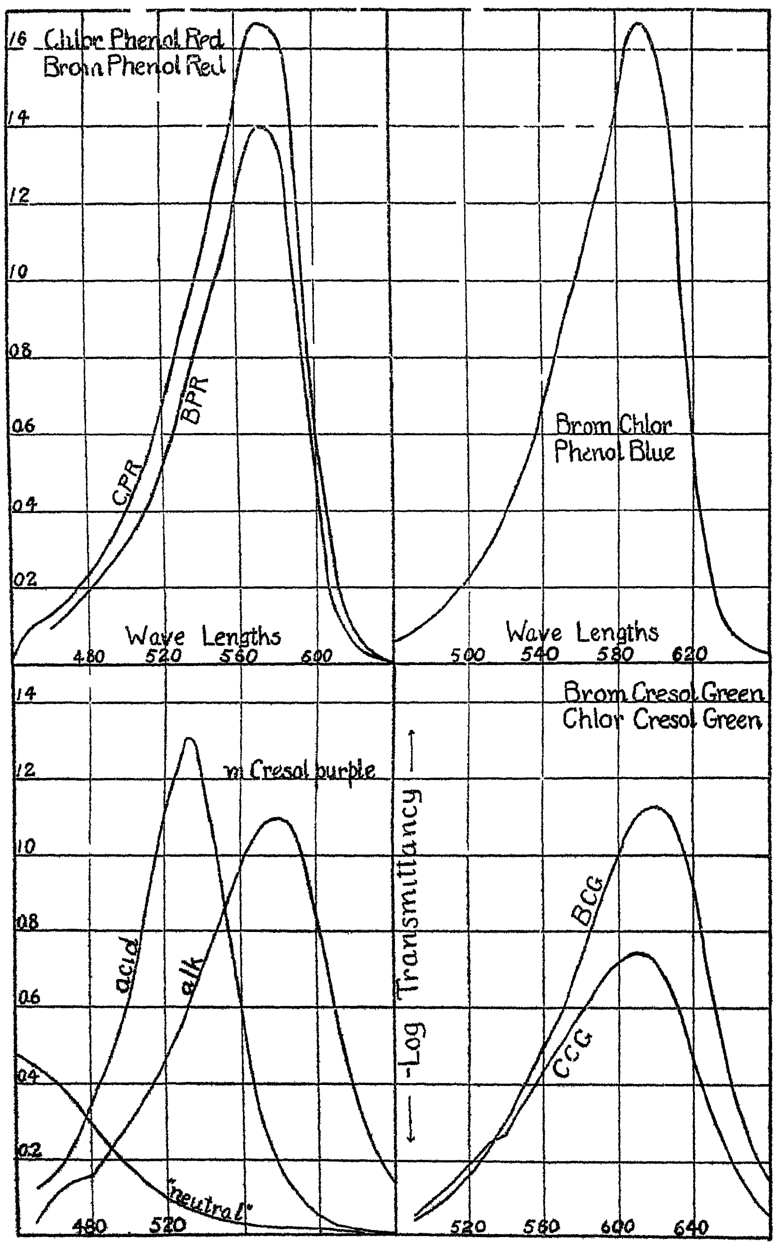
Chlor Phenol Red
Brom Phenol Red
CPR
BPR
Wave Lengths
480 520 560 600
Brom Chlor
Phenol Blue
Wave Lengths
500 540 580 620
m Cresol purple
acid
alk
"neutral"
480 520
-Log Transmittancy
Brom Cresol Green
Chlor Cresol Green
BCG
CCG
520 560 600 640

FIG 1

SPECTROPHOTOMETRIC DETERMINATION OF THE APPARENT DISSOCIATION CONSTANTS

The degree of transformation of an indicator within the range of its utility depends upon the hydrion concentration of its solution; and Brode (1924) and Holmes (1924, 1925) have shown how it may be measured with relative accuracy with the aid of the spectrophotometer All that is necessary is to determine under comparable conditions of concentration and temperature the ratio of color absorption within the useful pH range of any wave length in the absorption band (preferably at the peak) to that of the same wave length in the completely transformed compound This ratio gives the percentage dissociation of the indicator at the particular pH of the solution measured. The apparent dissociation constant, pK_a, of the indicator can then be calculated by the familiar equation:

$$pK_a = pH - \log \frac{\alpha}{1-\alpha}$$

where α is the degree of dissociation

This procedure yields consistent results, and in the case of brom cresol green we have been able to confirm the value obtained by Holmes and Snyder (1925b).

Suitable dilutions of each indicator were made in acid, alkali, or Clark and Lubs' buffers, as the case required, to produce complete color transformation, and these were compared with the same quantity of indicator in buffers of known pH.

All measurements were carried out at 30°.

m-Cresol purple, acid range.—The acid form of the indicator is red, with an absorption band in the yellow, the peak lying at 533 mμ. The accurate determination of the dissociation constant depends on obtaining complete dissociation of the indicator, and we found concentrated HCl necessary to produce complete acid transformation of m-cresol purple, just as Holmes and Snyder did for the acid range of thymol blue. The results are summarized in Table 3.

TABLE 3—*m-Cresol purple (acid range). Absorption maximum at 533mμ*

Buffer (pH)	pH electrometric	Conc. mg. per liter	T	−log T	α	$\log \frac{\alpha}{1-\alpha}$	pK_a
Conc HCl		1 6	7.7	1 1135	1 000		
1 2	1.224	1.6	18.3	.7375	.662	+0.2926	1.52
1 4	1.419	1.6	24.8	.6055	.544	+.0766	1.50
1 6	1.609	1.6	32.5	4881	.438	−.1082	1 50
1 8	1 805	3.2	17.7	*.3760	338	− 2920	1 51
2.0	2.000	3 2	26.1	*.2917	.262	− 4498	(1 55)
Average							1 51

* Corrected to concentration of 1.6 mg per liter.

It will be seen from the table that the pK_a values obtained near the middle of the dissociation curve agree fairly closely, the average value being 1.51.

m-Cresol purple, alkaline range—As the alkalinity of the indicator solution is increased through the pH range 7.0 to 11.0 the indicator becomes progressively and completely transformed to its alkaline form, which is purple in color, with an absorption band in the yellow, the peak lying at 580mμ. The apparent dissociation constant was determined spectrophotometrically, the fully transformed alkaline form of the indicator being produced in N/5 NaOH The data are summarized in Table 4. The average pK_a value found is 8.32

TABLE 4.—*m-Cresol purple (alkaline range). Absorption maximum at 580mμ*

Buffer (pH)	pH electrometric	Conc mg per liter	T	$-\log T$	α	$\log \frac{\alpha}{1-\alpha}$	pK_a
8 0	7 905	3.2	29 6	[1] 0 2644	0 274	+0 4242	8 33
8 2	8 108	3 2	18 3	[1] 3688	382	+ 2099	8 32
8 4	8 304	3 2	11 6	[1] 4678	484	+ 0278	8 33
8 6	8 500	3 2	7 1	[1] 5744	594	− 1655	8 33
8 8	8 700	1 6	20 3	6925	716	− 4024	8 30
N/5 NaOH	----------	1 6	10 8	9666	1 000	----------	----------
Average	----------	----------	----------	----------	----------	----------	8 32

[1] Corrected to concentration of 1 6 mg per liter

Brom cresol green.—The peak of the absorption band of the alkaline form of this indicator lies at 617mμ Clark and Lubs' borate buffer pH 9.6 was used to produce the alkaline transformation The average pK_a value found is 4 67, which agrees with that found by Holmes and Snyder (1925b). Our experimental data are summarized in Table 5. In our preliminary note, B Cohen (1923) this value was stated to be 5 0, as determined by the Salm method. We have found on subsequent repurification of the indicator that the apparent dissociation constant went down and remained constant at 4 67, although the bromine and sulfur analyses remained substantially unchanged (cf. Holmes and Snyder (1925b)).

TABLE 5.—*Brom cresol green Absorption maximum at 617mμ*

Buffer (pH)	pH electrometric	Conc mg per liter	T	$-\log T$	a	$\log \frac{a}{1-a}$	pK_a
4 4	4 397	3 2	22 3	[1] 0 3259	0 343	+0 2827	4 68
4 6	4 597	1 6	37 8	4225	444	+ 0970	4 69
4.8	4.800	1.6	28 6	5436	572	−.1254	4.67
5 0	4.998	1 6	22 3	6517	685	−.3383	4 66
5.2	5.193	1 6	18.3	.7375	776	− 5389	4.65
9.6	----------	1.6	11 2	.9508	1 000	----------	----------
Average	----------	----------	----------	----------	----------	----------	4.67

[1] Corrected to concentration of 1.6 mg per liter

Brom phenol red.—The absorption peak of the alkaline form of this indicator lies near 574mμ. Clark and Lubs' borate buffer pH 10.0 was used to produce the full alkaline color. The average pK_a value found is 6.16, and the data are summarized in Table 6. We have noted in some specimens of this indicator a peculiarity not observed in the other sulfonphthaleins examined. Alkaline solutions of these specimens showed a progressive decrease in absorption with time. In other repurified specimens there was no such change, and we are therefore inclined to ascribe this peculiar behavior to impurities.

TABLE 6.—*Brom phenol red. Absorption maximum at 574mμ*

Buffer (pH)	pH electrometric	Conc mg per liter	T	−log T	α	$\log \frac{\alpha}{1-\alpha}$	pK_a
6.0	5.956	1.6	27.8	0.5560	0.385	+0.2032	6.16
6.2	6.165	1.6	18.4	.7352	.509	−.0160	6.15
6.4	6.349	1.6	13.6	.8665	.600	−.1764	6.17
6.6	6.567	1.6	9.0	1.0458	.724	−.4197	6.15
6.8	6.769	1.6	7.1	1.1487	.796	−.5906	6.18
10.0	----------	1.6	3.6	1.4437	1.000	----------	----------
Average	----------	----------	----------	----------	----------	----------	6.16

Chlor phenol red.—The absorption peak of the alkaline form of this indicator lies near 573mμ. Clark and Lubs' borate buffer of pH 10.0 was used to produce the full alkaline color. The average pK_a value found was 5.98, and the data are summarized in Table 7.

TABLE 7.—*Chlor phenol red. Absorption maximum at 573mμ*

Buffer (pH)	pH electrometric	Conc mg per liter	T	−log T	α	$\log \frac{\alpha}{1-\alpha}$	pK_a
5.6	5.592	3.2	11.5	[1] 0.4697	0.296	+0.3737	5.97
5.8	5.783	1.6	25.9	.5867	.370	+.2309	6.01
6.0	5.956	1.6	17.1	.7670	.484	+.0279	5.98
6.2	6.165	1.6	10.8	.9666	.610	−.1939	5.97
6.4	6.349	1.6	7.6	1.1192	.706	−.3807	5.97
10.0	----------	1.6	2.6	1.5850	1.000	----------	----------
Average	----------	----------	----------	----------	----------	----------	5.98

[1] Corrected to concentration of 1.6 mg. per liter

Brom-chlor phenol blue.—The absorption peak of the alkaline form of this indicator lies at 596mμ. Clark and Lubs' borate buffer of pH 9.4 was used to produce the full alkaline color. The average pK_a value found is 3.98, and the data are summarized in Table 8.

TABLE 8.—*Brom-chlor phenol blue. Absorption maximum at 596 mμ*

Buffer (pH)	pH electrometric	Conc mg per liter	T	−log T	α	$\log \frac{\alpha}{1-\alpha}$	pK_a
3 8	3 803	3 2	8 0	[1] 0 5485	0 386	+0 2013	4 00
4 0	3 997	1 6	18 9	7235	509	− 0163	3 98
4 2	4 195	1 6	12 6	8996	633	− 2375	3 96
4 4	4 397	1 6	9 0	1 0458	736	− 4401	3 96
4 6	4 597	1 6	6 7	1 1739	827	− 6783	(3 92)
9 4		1 6	3 8	1 4202	1 000		
Average							3 98

[1] Corrected to concentration of 1 6 mg per liter

"SALT ERRORS" OF THE NEW INDICATORS

In the absence of a satisfactory theory that will permit calculation of the salt errors of indicators, the only reliable procedure is to determine these errors by direct hydrogen electrode measurements This has been done for those of the new sulfonphthaleins that are regarded as useful supplements to the Clark and Lubs series

Sodium chloride was added to various Clark and Lubs buffers so as to bring the solutions to 1 molar concentration (the electrolyte in the 0 02 M buffer being calculated in terms of NaCl) For measuring the salt error of m-cresol purple, acid range, the "1 M" buffer contained 53.110 gm NaCl, 250 c c. M/5 KCl and 207 5 c c. M/5 HCl per liter; for the alkaline range the "molar" buffer contained 52.268 gm NaCl, 250 c c. M/5 H_3BO_3, M/5 KCl and 29 5 c. c M/5 NaOH For brom phenol red and chlor phenol red the "molar" buffer contained 55 204 gm. NaCl, 250 c. c. M/5 KH_2PO_4 and 89 00 c c. M/5 NaOH per liter For brom cresol green and brom-chlor phenol blue the "molar" buffer contained 55 32 gm NaCl, 250 c. c. M/5 KH-phthalate, and 18.5 c c M/5 NaOH per liter.

These "molar" solutions were then diluted to 0.5 M, 0 2 M, and 0.005 M.

Hydrogen ion measurements were taken of the various solutions, both electrometrically and colorimetrically, the basis of the colorimetric comparisons being the standard Clark and Lubs buffers. The measurements were all made at 30°. The hydrogen electrode determinations were referred to M/20 KH-phthalate (pH 3.97) as a standard. The indicator solutions were 0.04 per cent concentrations of the mono-sodium salts in water These were prepared in the manner outlined by Clark (Determination of Hydrogen Ions, 2d ed., p. 80–81), the equivalents of N/20 NaOH per 100 mg. indicator being as follows:

TABLE 9.—*Quantities of NaOH to produce mono-sodium salts of indicators*

Indicator	Mol weight	N/20 NaOH per 100 mg.
		c. c.
m-Cresol purple	382.2	5.3
Brom cresol green	698.0	2.9
Brom phenol red	512.1	3.9
Chlor phenol red	423.2	4.7
Brom-chlor phenol blue	581.0	3.4

The differences between the electrometric and colorimetric pH values were determined and are summarized in Table 10 as corrections.

TABLE 10.—*Salt effect on the new sulfonphthaleins*

[The values given below are corrections to be added to the colorimetric pH determinations to bring the values to the electrometric pH of the corresponding Clark and Lubs' buffers]

Molar conc. salt	m-Cresol purple		Brom cresol green	Brom phenol red	Chlor phenol red	Brom-chlor phenol blue
	Acid range	Alkaline range				
1.0	−0.14	−0.29	−0.32	−0.26	−0.26	−0.33
0.5	−.09	−.22	−.25	−.22	−.20	−.28
0.2	−.02	−.16	−.16	−.12	−.10	−.16
0.005	+.11	+.09	+.09	+.25	+.23	+.14

Similar results were obtained in another series of experiments with brom cresol green. In this case a normal sodium citrate solution was used, containing 250 c. c. molar citric acid and 500 c. c. normal NaOH. The colorimetric comparisons were made against Clark and Lubs' buffers. The pH corrections found for the salt effect are given below.

1.0 normal	−0.20
0.5 normal	−.19
0.2 normal	−.09
0.1 normal	−.03

The salt effect at high salt concentrations appears to be least for m-cresol purple in acid ranges and greatest for brom-chlor phenol blue. As the salt concentration decreases toward 0.1 molar the effect becomes practically negligible. With still greater dilutions the sign of the salt "error" changes and becomes quite appreciable at 0.005 molar salt (cf. Kolthoff, 1925, and Lepper and Martin, 1926).

"PROTEIN" EFFECT

Protein material in solutions containing indicators exerts specific effects on the colors, effects dependent on the nature not only of the indicator but also of the protein and apparently on its previous

treatment. The only safe procedure when attempting the colorimetric determination of pH in protein solutions is to calibrate the readings of the particular indicator in the specific protein solution with the hydrogen electrode.

The following data are presented merely to show the magnitude of the effect produced by a certain peptone upon the sulfonphthalein indicators. Incidentally, the sulfonphthaleins in the Clark and Lubs series were also included so as to have a comparable set of data. All observations were made at least in duplicate and were consistent. Colorimetric readings were made to the nearest 0.05 pH against Clark and Lubs' buffers. Quadruplicate hydrogen electrode measurements had to agree within 0.5 mv before being accepted. The determinations were made at 30°.

The peptone solution was a 5 per cent concentration of Witte's peptone, which was boiled and filtered. To aliquots of this stock peptone solution were added small quantities of conc. HCl or NaOH to bring the pH within the range of the particular indicator studied. In most of the cases a more or less distinct opalescent haze appeared after the addition of acid or alkali, but the colorimetric and electrometric readings remained unchanged after filtration of such solutions.

The same experiment was repeated two months later. The same lot of peptone was used and apparently the same technic. The results disclosed certain divergencies which we are unable to explain. There was substantial agreement in the results for the indicators of the acid regions down to brom cresol green, but below that the two series tend to diverge. The data are summarized in Table 11.

TABLE 11.—"*Protein effect*" *on sulfonphthalein indicators*

[The values listed are the corrections to be added to colorimetric pH readings to bring them to the electrometric]

Indicator	In 5 per cent Witte peptone		Clark and Lubs[1]
	Series 1	Series 2	
m-Cresol purple (acid)	−0.20	−0.20	
Thymol blue (acid)	−.19	−.20	
Brom phenol blue	−.28	−.43	+0.05
Brom-chlor phenol blue	−.28	−.43	
Brom cresol green	−.10	−.13	
Chlor phenol red	+.09	−.07	
Brom phenol red	+.11	−.10	
Brom cresol purple	+.11	−.10	+.01
Brom thymol blue	+.31	+.07	+.10
Phenol red	+.24	−.01	+.04
Cresol red	+.02	−.03	+.03
m-Cresol purple (alk.)	+.03	−.02	
Thymol blue (alk.)	+.09	−.03	+.04

[1] In a 1 per cent peptone-beef infusion broth.

For purposes of comparison there is included in Table 11, under the column headed Clark and Lubs, the corrections found by these authors (1917) for a 1 per cent peptone-beef infusion broth. While a strict comparison could scarcely be considered valid, it nevertheless is useful in a rough survey of the ground. Our results show the general magnitude of the effect produced on the colorimetric reading by the presence of 5 per cent peptone. Their main value lies in again emphasizing the dictum that "protein effects" have to be determined experimentally for the material under examination and that calibration is not a simple matter.

SUMMARY

The following new sulfonphthaleins have been synthesized: m-cresolsulfonphthalein, tetra-brom-m-cresolsulfonphthalein, tetra-chlor-m-cresolsulfonphthalein, dibrom-phenolsulfonphthalein, dichlor-phenolsulfonphthalein, dibrom-dichlor-phenolsulfonphthalein, and 2, 6-xylenol sulfonphthalein. The effects of substitution on dissociations in the sulfonphthaleins are discussed, and certain predictions based on an empirical formulation of the effects have been verified.

All but the last mentioned of these compounds are recommended as useful supplements to the Clark and Lubs series of acid-base indicators, or as substitutes for certain unsatisfactory members in that series. The new compounds have been studied as to their indicator properties, spectrophotometric behavior in the visible region, apparent dissociation constants, salt, and protein effects. The essential characteristics are summarized in Table 12.

TABLE 12.—*Summary of characteristics of the new sulfonphthalein indicators*

Sulfonphthalein	Common name	Absorption max [1]	pK_a	Useful pH range	Color change
m-Cresol	m-Cresol purple	[2] 533	1.51	1.2-2.8	Red-yellow.
		[3] 580	8.32	7.4-9.0	Yellow-purple.
Tetra-brom m-cresol	Brom cresol green	617	4.67	3.8-5.4	Yellow-blue
Tetra-chlor m-cresol	Chlor cresol green	612	4.8	4.0-5.6	Do
Dibrom phenol	Brom phenol red	574	6.16	5.2-6.8	Yellow-red.
Dichlor phenol	Chlor phenol red	573	5.98	4.8-6.4	Do
Dibrom dichlor phenol	Brom-chlor phenol blue	596	3.98	3.0-4.6	Yellow-blue.

[1] The absorption maxima are for the (alkaline) disodium salts, except in the case of m-cresol purple, acid range, where the value given refers to the absorption of the free acid.
[2] Acid.
[3] Alk.

References

Brode, W. R. 1924. Jour. Am. Chem. Soc., 46, 581.
Clark, W. M., and Lubs, H. A. 1916. Jour. Wash. Acad. Sci., 6, 483.
Clark, W. M., and Lubs, H. A. 1917. Jour. Bact., 2, 1, 109, 191.
Clark, W. M., Cohen, B., and Elvove, E. 1922. In "The Determination of Hydrogen Ions," by W. M. Clark, 2d edition, p. 93.
Cohen, A. 1922. Biochem. Jour., 16, 31.

Cohen, A 1923 Biochem Jour, **17**, 535
Cohen, B. 1923 Public Health Reports, **38**, 199.
Cohen, B, Gibbs, H D, and Clark, W M 1924a Public Health Reports, **39**, 381.
Cohen, B, Gibbs, H D, and Clark, W M 1924b Public Health Reports, **39**, 804
Gattermann, L 1923 Practical Methods of Organic Chemistry, 3d edition, N Y, p 202.
Gibbs, H. D, Cohen, B, and Cannan, R K 1925 Public Health Reports, **40**, 649.
Gibson, K. S, et al 1922 Sci Papers, U S Bur Standards, **18**, 124 (No. 440)
Holmes, W C 1924 Jour Am Chem Soc, **46**, 627
Holmes, W C, and Snyder, E F 1925a Jour Am Chem Soc, **47**, 221
Holmes, W C, and Snyder, E F 1925b Jour Am Chem Soc, **47**, 226.
Kolthoff, I M 1925 Rec trav chim, **44**, 275
Lepper, E H, and Martin, C. J 1926 Biochem J **20**, 45
Lubs, H A, and Acree, S F. 1916 Jour Am Chem Soc, **38**, 2772
Lubs, H A, and Clark, W M 1915 Jour. Wash Acad Sci, **5**, 609
Lubs, H A, and Clark, W M. 1916 Jour Wash Acad Sci, **6**, 481
Orndorff, W R, et al 1921 Phys Rev, **17**, 437
Orndorff, W R, and Purdy, A C. 1926 Jour Am Chem Soc, **48**, 2212.
Rous, P 1925 Jour Exp Med, **41**, 451
Salm, E. 1906 Z. physik. Chem, **57**, 471
Simms, H S. 1926 Jour Am Chem. Soc, **48**, 1251
Sohon, M D 1898 Am. Chem Jour, **20**, 257
White, E C, and Acree, S F 1919. Jour Am Chem Soc, **41**, 1190.

SMALLPOX IN MINNESOTA—1913-1925

In the Public Health Reports of December 3, 1926, page 2789, appears the statement that 1,298 cases of smallpox with 63 deaths had occurred in Minneapolis, Minn. Dr. A. J. Chesley, State health officer of Minnesota, advises that the number of deaths was 363, not 63, which gives a case fatality in this series of cases of more than 25 per cent

Doctor Chesley sends the following statement of vaccination histories of smallpox cases which have occurred in Minnesota:

MINNESOTA, SMALLPOX

1925—Total cases, 973, total deaths, 198

Class A.—Successfully vaccinated within seven years before attack, 15 cases, or 1 54 per cent; 1 death, or 0.51 per cent.

Class B—Successfully vaccinated over seven years before attack, 191 cases, or 19.63 per cent; 41 deaths, or 20.71 per cent.

Classes C and D.—Class C, never successfully vaccinated, and Class D, unable to give definite history of vaccination and no scar found, 767 cases, or 78.83 per cent; 156 deaths, or 78 78 per cent.

1913-1925—Total cases, 39,250, total deaths, 613

Class A—661 cases, or 1 68 per cent of all, 1 death, or 0.16 per cent of all deaths from smallpox.

Class B—1,976 cases, or 5 03 per cent of all: 89 deaths, or 14 52 per cent of all deaths from smallpox

Classes C and D.—36,613 cases, or 93 28 per cent of all, 523 deaths, or 85 32 per cent of all deaths from smallpox.

Vaccination history of 505 fatal cases in Minnesota

	1924	1925	Total
Class A	0	1	1
Class B	47	41	88
Class C	243	151	394
Class D	17	5	22
Total	307	198	505

PUBLIC HEALTH ENGINEERING ABSTRACTS

Lead Poisoning From Food.—Anon. *The Lancet,* No 5375, September 4, 1926, p 507.

"The story is told in the *Presse Médical* of an outbreak of lead poisoning which commenced at Vidin, in Bulgaria, during April, 1923, and terminated only when its origin was detected five months later. By that time there had been 314 cases, occurring in 153 families, with three deaths, while several other deaths occurred among those poisoned as a result of other disorders considered to have been brought on or at least accentuated by the lead absorbed; notably one case of cancer of the rectum in a woman aged 28 is attributed to this cause. The number of cases ranks the epidemics with others, such as have followed upon accidentally mixing of white lead with flour, from drinking plumbo-solvent water by the royal household at Versailles in the eighteenth century, and from Loch Katrine, in Glasgow, at the end of the nineteenth century, and the 350 cases at Saint-Georges-sur-Eure in 1865. The signs and symptoms appear to have been quite typical; the blue line was present in 99 per cent of cases, lead colic was frequent and affections of the nervous system, with 3 cases (1 fatal) of encephalopathy. Nephritis and wrist drop, symptoms of chronic lead poisoning, were not observed. The source of the poisoning was found to be adulterated red pepper. This pepper, prepared from capsicum fruit, is much used in Hungary and Bulgaria, and it is often adulterated with such things as maize or vetch flour, sawdust, iron filings, or brick dust, but on this occasion analysis revealed the presence of 20.5 per cent of red lead and 4.1 per cent of sand, while very small amounts of true pepper were found.

This fraudulent "red pepper" was placed on the market by only one firm, and inhabitants who bought their red pepper elsewhere or made it themselves escaped Most of the cases followed the ingestion of a number of small doses, a teaspoonful of pepper serving two to four persons for several days; but one case followed a single dose of two teaspoonfuls of "pepper," containing about 6 grains of red lead, taken at one meal; the case recovered "

Outbreak of Paratyphoid Fever Due to Infected Ice Cream.—J. P. Kinloch. (*The Medical Officer.* 1925, v 34, pp. 191–192.) Abstract by W. G. Savage in *Bulletin of Hygiene*, vol. 1, No. 2, February, 1926, p. 101.

"An outbreak of 23 cases, all but 2 in Aberdeen, of paratyphoid fever in August, 1925. The symptoms were all of this disease and none were of food-poisoning type. For example, in all the cases the onset was characteristically insidious; and while vomiting was not uncommon, when present it was slight. In general, constipation and not diarrhea was the rule. Rose spots were present in most cases. Although a number of the cases were severe, there were no deaths. The incubation period was about 15 days.

"Careful epidemiological inquiry showed that the one article of food consumed in common was ice cream, obtained from one particular shop The milk used to make the ice cream was naturally the object of suspicion, but milk from the same source used elsewhere produced no disease. About 6 gallons of milk were daily converted into ice cream on the incriminated premises The staff on these premises was investigated, but no evidence of previous illness of any member was forthcoming and the bacteriological examinations were negative. *It was not possible to ascertain how the ice cream became* infected, but direct or indirect contamination by a paratyphoid B 'carrier' was considered as the most likely source. Investigations could not be undertaken until three weeks after the ice cream became infective.

"The outbreak was definitely proved to be paratyphoid fever by the isolation of *B. paratyphosus* B from the feces of eight sufferers and from the urine of two cases, and by the demonstration of specific agglutinins in the blood of all the cases.

"A point of interest is that the ice cream on the day it was infective was distributed to between 120 to 360 people, while only 23 developed the disease. Probably only part of it was infected and the freezing prevented distribution of the bacilli throughout the whole mass."

Clean and Safe Milk Campaign to Stimulate Use.—S. J. Crumbine, general executive, American Child Health Association, New York City. *The Nation's Health*, vol. 8, No. 8, August, 1926, pp. 530–532. (Abstract by H. N. Old.)

Some very significant facts and figures on milk-borne epidemics of communicable diseases are tabulated and commented upon, as obtained from questionnaires covering 42 States, the District of Columbia, 3 Territories, and 3 Canadian Provinces.

During 1924 and 1925, 43 and 44 such epidemics are reported, respectively, with a total for the two years of 3,286 cases and 130 deaths, typhoid epidemics constituting 72 per cent of the total reported.

The danger from tuberculous cows is dwelt upon at length and the conclusion reached by Park and Krumwiede is stated—that 27 per cent of tubercular children under 5 and 25 per cent of those between 5 and 16 years of age are found to have infection of the bovine type.

Up to the present time 12 States have been surveyed, 179 towns covered, 3,945 supplies and 4,928 samples examined for visible dirt, bacteriological contamination, and detection of adulteration, Standard Methods being followed. Summarizing the survey results, it is stated that 77 per cent of the samples were classed as dirty, 58 per cent showing bacterial count over 100,000, with 43 per cent positive for colon bacillus, and about 14 per cent adulteration.

The objectives of the campaign are, first, stimulation of the production and distribution of an abundant, clean, and safe milk supply; second, to center the responsibility for such production and distribution on dairymen, milk dealers, and State and local dairy and health officials; and third, to promote increased consumption of milk after reasonable assurance of its safety.

The by-products of the survey thus far are said to be most encouraging, resulting in the promotion of a clean-up among the dairymen and dealers, provision of local supervision using laboratory examinations in many instances, and commitments made toward a general tightening of milk-control regulations.

While the survey shows the daily per capita milk consumption to be only 0.6 to 0.8 pint, the conclusion is reached that, in many communities, increased consumption should not be urged until the safety of the supply is assured

The organizations cooperating actively in this work are the American Child Health Association, the Association of Dairy, Food, and Drug Officials, and the Conference of State and Provincial Health Authorities.

Bacterial Flora of the Market Oyster.—Calista Eliot. *The American Journal of Hygiene*, vol. 6, No. 6, November, 1926, p. 755.

(1) Shucked oysters and shell oysters kept at the laboratory temperatures show a sudden and maximum rise in total count from the second to the fourth day of storage; (2) the *Bacillus coli* score of oysters stored in a cool basement increased from 4 to 500,000 in 14

days; as signs of spoilage appeared, the *Bacillus coli* score decreased; (3) hydrogen ion determinations on oysters spoiling in the shell showed little change in acidity; shucked oysters, however, became markedly acid during the first few days of spoilage; later, there was a reversal of reaction and the original pH was regained and maintained; (4) in the ice box the rise in acidity lagged two or three days behind and remained at a slightly lower level than at room temperature; at ice-box temperature the maximum total count was about one-tenth of the maximum count at room temperature; (5) the bacteria of the decomposing oyster may be divided into five principal groups—(*a*) the colon-aerogenes group; (*b*) the streptococci; (*c*) the 'water bacteria,' including members of the green fluorescent, the yellow pigmented, and the nonpigmented groups, and vibrios; (*d*) the anaerobes, and (*e*) the incidental organisms, such as the chromogenic cocci and the aerobic spore formers; (6) in shucked oysters the souring process may be initiated by either the colon-aerogenes group or the streptococci; if the streptococci are present in large numbers, the colon-aerogenes group is inhibited by the second day; (7) after a varying period of time, 12 days or longer, the water forms multiply rapidly, there is a reversion in reaction and actual decomposition of the oyster meat begins. Certain members of the green pigmented and the yellow pigmented groups produce changes in sterilized oysters comparable to those observed in the decomposition of market oysters, there is a slimy chromogenic growth and a marked softening, and, in some instances, liquefaction of the oyster meat when these organisms are grown upon them; members of these groups are always found abundantly in spoiling oysters, other water forms which are also abundant in the spoiling oyster do not initiate decomposition processes in sterilized oysters; (8) several types of anaerobes multiply in spoiling oysters and produce large amounts of gas, but apparently bring about no putrefactive changes.

Summary of the Purpose and Principles of Aeration of Water Supplies.—C. A. Emerson, jr. Proceedings of Eighth Texas Water Works Short School, Bulletin No. 1, January 23, 1926, pp. 78–83. (Abstract by W. H. Wendler.)

The aeration of ground water is usually for the purpose of the oxidation of iron, manganese, or organic matter and for removing volatile odors and gases such as carbon dioxide and hydrogen sulphide. These constitutents, when present to excess, impart color, turbidity, and sometimes taste to the water, and by deposit cause staining of plumbing fixtures and white clothing in the laundry. Carbon dioxide also dissolves iron from the interior of the mains. There have been instances in which samples of tap water showed six or more parts per million of iron in contrast to one part per million at the well.

Where iron is present it is readily changed by oxidation from the soluble ferrous form to the insoluble ferric hydrate, only one part of oxygen being required to oxidize seven parts of iron It has been found that if the dissolved oxygen content were permitted to rise above 50 per cent saturation, the iron and manganese could not be satisfactorily removed In some Massachusetts plants where manganese and organic matter interfered with precipitation of iron in fully aerated water, the tricklers were operated as submerged contact beds.

Aeration for removal of tastes and odors due to industrial waste pollution, particularly 'phenol' wastes from by-product coke ovens and wood distillation plants, has been of little practical value in most instances

Sometimes surface supplies, taken from the lower levels of large reservoirs or from rivers which have been ice blocked for long periods, are somewhat deficient in oxygen, and in these instances aeration was helpful

Connecting Safe and Unsafe Water Supplies.—Anon. *Public Works*, vol 57, No 8, September, 1926, pp 281–282 (Abstract by Dana E Kepner.)

At the conference this year of the State sanitary engineers a committee on cross-connections presented a report recommending the adoption by the conference of resolutions providing that "no physical connections should be permitted between any potable public water supplies, either through cross-connections, auxiliary intakes or by-passes, and other supplies except as follows: (1) With another potable public water supply; or (2) with a potable supply which is regularly examined as to its quality by those in charge of the potable public supply to which the connection is made." A cross-connection is defined as any physical connection whereby a potable public water-supply system is connected with another water-supply system, whether public or private, in such a manner that a flow of water into the potable supply is possible therefrom, directly through the manipulation of gate valves, because of ineffective check or back-pressure valves, or otherwise

The results from a questionnaire sent to the various State boards of health dealing with existing regulations in this respect are given.

Garbage Collection and Disposal.—Anon. *Public Works*, vol. 57, No. 10. November, 1926, pp. 385–387. (Abstract by C. L. Pool.)

This article is the first of a series in review of a symposium on garbage collection and disposal held by the sanitary engineering division of the American Society of Civil Engineers. Six papers constituting the article were as follows: A general review of the problem, by Samuel A. Greeley; a description of practice at Lansing,

Mich., by Edward D Rich; the same for the hog feeding for Los Angeles, Calif., by W. T Knowlton; a description of the Beccari system at Scarsdale, N. Y., by Arthur Boniface; one of high temperature incineration at Toronto, Canada, by A J. Burnett; and one of the Cobwell system of garbage reduction at Rochester, N. Y, by John V. Lewis.

Mr. Greeley discussed administrative and engineering problems encountered and outlined the procedure recommended to cities confronted with the problem. In connection with incineration specifications recently prepared by him the work was classified under five heads: (1) Incinerator furnaces and appurtenances; (2) incinerator building and scale; (3) chimney; (4) runway; and (5) sewers and sewage-disposal plant. A list of reduction plants in operation noted whether each was operated by the city or by a contractor. The Kansas City contract allows disposal by any satisfactory method. The contract price (1925) was $6.45 a ton for collection and $1 a ton for disposal.

Can collection practice at Lansing, Mich, is emphasized and constructional details of cans are given. Frequency and methods of collection are outlined and costs given include $0.91 per capita of the population served for collection in 1924.

Los Angeles practice is discussed, with quantities and costs noted. Material rejected by the pigs is covered with gypsum to conserve the ammonia content, dried, and ground for use as fertilizer.

Examination for Entrance into the Regular Corps of the United States Public Health Service

Examinations of candidates for entrance into the Regular Corps of the United States Public Health Service will be held at the following-named places on the dates specified:

Washington, D. C	February 7, 1927
Chicago, Ill	February 7, 1927
New Orleans, La	February 7, 1927
San Francisco, Calif	February 7, 1927

Candidates must be not less than 23 nor more than 32 years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written, and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon General, United States Public Health Service, Washington, D. C.

DEATHS DURING WEEK ENDED DECEMBER 18, 1926

Summary of information received by telegraph from industrial insurance companies for week ended December 18, 1926, and corresponding week of 1925. (From the Weekly Health Index, December 22, 1926, issued by the Bureau of the Census, Department of Commerce)

	Week ended Dec 18, 1926	Corresponding week, 1925
Policies in force	65, 797, 778	62, 410, 497
Number of death claims	12, 674	12 128
Death claims per 1,000 policies in force, annual rate	10 0	10 1

Deaths from all causes in certain large cities of the United States during the week ended December 18, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, December 22, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Dec 18, 1926		Annual death rate per 1 000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Dec 18, 1926 [2]
	Total deaths	Death rate [1]		Week ended Dec 18, 1926	Corresponding week, 1925	
Total (65 cities)	7 237	[3] 13 1	13.0	787	771	66
Akron	27			2	3	22
Albany [4]	37	16 2	23.0	1	3	21
Atlanta	64			5	10	
White	29			2	7	
Colored	35	(5)		3	3	
Baltimore [4]	222	14 3	12 3	24	15	73
White	162			16	11	60
Colored	60	(5)		8	4	127
Birmingham	55	13 6	20 0	10	3	
White	28			4	1	
Colored	27	(5)		6	2	
Boston	209	13 8	15.4	31	31	87
Bridgeport	33			5	6	85
Buffalo	127	12.2	14 1	12	20	50
Cambridge	28	12 0	13.5	8	6	142
Camden	37	14.7	12.1	9	4	151
Canton	29	13 7	8.8	3	3	66
Chicago [4]	696	11 9	12 2	64	80	56
Cincinnati	127	16 1	17 7	9	17	56
Cleveland	184	10 0	10 3	16	30	42
Columbus	93	17 0	12 1	7	3	65
Dallas	50	12.8	16 4	5	18	
White	39			5	16	
Colored	11	(5)		0	2	
Denver	90	16 5	14 7	15	7	
Des Moines	40	14 3	8 5	6	0	160
Detroit	274	11 1	11 5	48	45	78
Duluth	24	11 1	11 3	6	2	130
El Paso	26	12.4	12.4	6	4	
Erie	36			5	7	98
Fall River [4]	33	13 1	10 5	6	5	94
Flint	40	15 3	7 6	16	5	271
Fort Worth	38	12 5	10 1	3	6	
White	34			2	5	
Colored	4	(5)		1	1	
Grand Rapids	32	10 7	9.5	6	5	86
Houston	46			4	11	
White	35			4	5	
Colored	11	(5)		0	6	
Indianapolis	104	14 8	15 5	7	7	53
White	87			5	6	44
Colored	17	(5)		2	1	115
Jersey City	62	10 2	11 9	6	15	45
Kansas City, Kans	25	11 1	11.7	1	4	19
White	22			1	3	22
Colored	3	(5)		0	1	0
Kansas City, Mo	116	16 1	12.1	9	7	
Los Angeles	261			31	22	86

(See footnotes at end of table)

Deaths from all causes in certain large cities of the United States during the week ended December 18, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925 (From the Weekly Health Index, December 22, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Dec 18, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate, week ended Dec 18, 1926[2]
	Total deaths	Death rate[1]		Week ended Dec 18, 1926	Corresponding week, 1925	
Louisville	86	14.4	13.6	4	6	34
White	62			3	5	29
Colored	24	(5)		1	1	70
Lowell	22			1	7	19
Lynn	25	12.5	13.7	1	5	26
Memphis	66	19.4	21.2	9	8	
White	29			2	5	
Colored	37	(5)		7	3	
Milwaukee	107	10.8	9.2	19	11	90
Minneapolis	101	12.1	14.2	6	11	33
Nashville[4]	45	17.1	15.0	5	1	
New Bedford	20			2	2	35
New Haven	46	13.2	11.1	4	3	55
New Orleans	163	20.3	19.5	14	12	
White	90			8	7	
Colored	73	(5)		6	5	
New York	1,724	13.4	12.3	148	140	60
Bronx Borough	173	10.0	10.8	17	16	57
Brooklyn Borough	530	12.8	10.9	57	45	58
Manhattan Borough	630	17.5	16.1	56	62	62
Queens Borough	128	8.7	7.9	15	14	68
Richmond Borough	43	15.7	16.6	3	3	53
Newark, N. J.	90	10.2	13.1	14	11	67
Norfolk	23	6.9	12.0	4	4	51
White	11			1	3	33
Colored	12	(5)		3	1	159
Oakland	52	10.4	11.1	6	5	70
Oklahoma City	26			4	4	
Omaha	58	14.0	15.7	6	9	64
Paterson	35	12.8	11.4	5	2	84
Philadelphia	505	13.2	14.6	46	55	61
Pittsburgh	176	14.4	13.4	25	15	83
Portland, Oreg.	68			2	2	20
Providence	59	11.2	11.0	5	2	42
Richmond	53	11.6	14.9	8	3	100
White	35			4	0	78
Colored	18	(5)		4	3	139
Rochester	62	10.1	13.8	5	6	40
St Louis	220	13.8	14.5	15	21	
St Paul	58	12.2	12.1	2	4	18
Salt Lake City[4]	28	11.0	11.5	8	3	122
San Antonio	40	10.2	14.7	11	10	
San Diego	51	21.2	20.7	3	4	64
San Francisco	154	14.2	12.0	6	8	36
Schenectady	25	14.0	8.4	7	4	201
Seattle	76			10	4	96
Somerville	29	15.1	15.3	1	3	28
Spokane	24	11.5	14.8	1	3	23
Springfield, Mass.	37	13.3	10.3	5	3	77
Syracuse	53	14.9	13.2	3	7	38
Tacoma	29	14.3	10.0	1	0	24
Toledo	75	13.3	10.0	10	7	96
Trenton	34	13.2	17.8	6	8	102
Utica	36	18.2	15.4	3	3	68
Washington, D. C.	120	11.9	12.6	13	16	74
White	74			8	9	67
Colored	46	(5)		5	7	91
Waterbury	21			1	4	24
Wilmington, Del.	21	8.8	13.2	4	2	89
Worcester	53	14.3	11.5	5	3	60
Yonkers	35	15.7	8.3	6	1	135
Youngstown	38	12.0	11.1	9	4	114

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in registration area for births.
[3] Data for 63 cities.
[4] Deaths for week ended Dec 17, 1926.
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Norfolk, 38; Richmond, 32; and Washington, D. C., 25.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary and the figures are subject to change when later returns are received by the State health officers

Reports for Week Ended December 25, 1926

ARIZONA

	Cases
Chicken pox	2
Diphtheria	3
German measles	23
Paratyphoid fever	1
Scarlet fever	3
Smallpox	1
Tuberculosis	21
Typhoid fever	1

ARKANSAS

	Cases
Chicken pox	21
Diphtheria	8
Influenza	35
Malaria	3
Measles	1
Scarlet fever	9
Smallpox	1
Tuberculosis	1
Typhoid fever	3

COLORADO

	Cases
Cerebrospinal meningitis	1
Chicken pox	15
Diphtheria	9
Measles	4
Mumps	1
Pneumonia	3
Scarlet fever	31
Smallpox	1
Tuberculosis	97
Whooping cough	1

CONNECTICUT

	Cases
Cerebrospinal meningitis	1
Chicken pox	81
Diphtheria	18
German measles	3
Influenza	2
Measles	29
Mumps	17
Pneumonia (all forms)	55
Poliomyelitis	1
Scarlet fever	60
Septic sore throat	1
Trachoma	1
Tuberculosis (all forms)	14
Typhoid fever	2
Whooping cough	28

DELAWARE

	Cases
Influenza	2
Scarlet fever	14
Tuberculosis	4
Typhoid fever	2
Whooping cough	3

FLORIDA

	Cases
Cerebrospinal menigitis	1
Chicken pox	21
Diphtheria	30
Influenza	3
Malaria	4
Measles	8
Mumps	16
Paratyphoid fever	1
Pneumonia	5
Scarlet fever	13
Smallpox	39
Tetanus	1
Tuberculosis	11
Typhoid fever	4
Whooping cough	5

IDAHO

	Cases
Chicken pox	4
Diphtheria	3
Measles	57
Pneumonia	4
Scarlet fever:	
Nampa	15
Scattering	27
Smallpox	1
Tuberculosis	1
Typhoid fever	1

ILLINOIS

	Cases
Cerebrospinal meningitis	
Cook County	3
Chicken pox	360
Diphtheria	110
Influenza	57
Lethargic encephalitis	
Cook County	1
Measles	777
Mumps	82
Pneumonia	291
Scarlet fever	234
Smallpox	29
Tuberculosis	267
Typhoid fever	16
Whooping cough	118

KANSAS

Chicken pox	161
Diphtheria	19
Influenza	6
Measles	34
Mumps	14
Pneumonia	35
Scarlet fever	77
Septic sore throat	1
Smallpox	
Seneca	13
Topeka	10
Scattering	6
Tuberculosis	62
Typhoid fever	1
Whooping cough	9

LOUISIANA

Diphtheria	17
Influenza	11
Lethargic encephalitis	1
Malaria	6
Measles	24
Pneumonia	26
Poliomyelitis	1
Scarlet fever	9
Smallpox	1
Tuberculosis	32
Typhoid fever	6

MAINE

Chicken pox	43
Diphtheria	1
German measles	1
Influenza	4
Measles	78
Mumps	16
Pneumonia	17
Scarlet fever	42
Tuberculosis	6
Typhoid fever	1
Vincent's angina	2
Whooping cough	33

MARYLAND[1]

Cerebrospinal meningitis	2
Chicken pox	146
Diphtheria	48
German measles	1

[1] Week ended Friday.

MARYLAND—continued

	Cases
Influenza	42
Measles	27
Mumps	22
Paratyphoid fever	1
Pellagra	1
Pneumonia (all forms)	77
Scabies	1
Scarlet fever	68
Septic sore throat	4
Tuberculosis	27
Typhoid fever	11
Typhus fever	1
Whooping cough	67

MASSACHUSETTS

Cerebrospinal meningitis	2
Chicken pox	265
Conjunctivitis (suppurative)	4
Diphtheria	104
German measles	7
Influenza	14
Lethargic encephalitis	1
Measles	59
Mumps	140
Ophthalmia neonatorum	25
Pneumonia (lobar)	72
Poliomyelitis	1
Scarlet fever	236
Septic sore throat	2
Tuberculosis (all forms)	113
Typhoid fever	31
Whooping cough	115

MICHIGAN

Diphtheria	63
Measles	66
Pneumonia	60
Scarlet fever	154
Smallpox	19
Tuberculosis	13
Typhoid fever	1
Whooping cough	89

MONTANA

Chicken pox	11
Diphtheria	7
Measles	73
Mumps	9
Scarlet fever	103
Smallpox	10
Typhoid fever	3

NEW JERSEY

Anthrax	1
Chicken pox	145
Diphtheria	78
Influenza	11
Measles	21
Pneumonia	86
Scarlet fever	127
Typhoid fever	1
Whooping cough	102

NEW YORK

(Exclusive of New York City and Syracuse)

	Cases
Anthrax	1
Cerebrospinal meningitis	3
Chicken pox	278
Diphtheria	76
Dysentery	1
German measles	41
Lethargic encephalitis	1
Measles	571
Mumps	103
Ophthalmia neonatorum	2
Paratyphoid fever	1
Pneumonia	200
Poliomyelitis	2
Scarlet fever	149
Smallpox	6
Trachoma	1
Typhoid fever	9
Vincent's angina	6
Whooping cough	154

OREGON

	Cases
Cerebrospinal meningitis	1
Chicken pox	18
Diphtheria	12
Influenza	15
Malaria	1
Measles	32
Mumps	4
Pneumonia	9
Scarlet fever	32
Septic sore throat	1
Smallpox	17
Tuberculosis	[1] 3
Typhoid fever	1
Whooping cough	1

SOUTH DAKOTA

	Cases
Cerebrospinal meningitis	1
Chicken pox	19
Diphtheria	1
Influenza	1
Measles	35

SOUTH DAKOTA—continued

	Cases
Pneumonia	1
Scarlet fever	27
Smallpox	4
Whooping cough	1

UTAH

	Cases
Chicken pox	10
Diphtheria	2
German measles	3
Measles	179
Mumps	19
Pneumonia	6
Scarlet fever	4

VERMONT

	Cases
Chicken pox	16
Measles	23
Mumps	16
Scarlet fever	4
Whooping cough	24

WASHINGTON

	Cases
Cerebrospinal meningitis	1
Chicken pox	110
Diphtheria	23
German measles	17
Measles	117
Mumps	30
Scarlet fever	91
Smallpox	38
Tuberculosis	4
Typhoid fever	4
Whooping cough	2

WEST VIRGINIA

	Cases
Chicken pox	101
Diphtheria	33
Influenza	30
Measles	103
Scarlet fever	59
Smallpox	1
Tuberculosis	13
Typhoid fever	16
Whooping cough	69

Reports for Week Ended December 18, 1926

NORTH DAKOTA

	Cases
Chicken pox	24
Diphtheria	7
Measles	361
Mumps	10
Pneumonia	5
Scarlet fever	54
Smallpox	1
Tuberculosis	4
Typhoid fever	1
Whooping cough	2

[1] Deaths.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
July, 1926										
Massachusetts	8	174	9	4	917	4	21	628	0	46
October, 1926										
Texas	0	180	57	1,392			0	81		160
November, 1926										
Illinois	12	781	80	5	1,368	0	12	1,124	25	202
Iowa	3	132			82		1	220	27	12
Louisiana	4	180	61	57	52	10	2	87	14	57
Maryland	3	208	71	2	80	0	1	192	0	96
Michigan	0	711	15	1	325		7	962	90	49
Minnesota	1	430	9		511		0	1,054	23	15
New York	18	1,178		7	2,657		41	1,213	76	206
North Dakota	0	26	0		423		1	226	32	3
Ohio	6	1,333	23	1	134		7	1,387	132	159
Wisconsin	11	301	140		1,837		7	606	0	32
Wyoming	7	5	3		92		1	88	6	7

November, 1926

	Cases
Actinomycosis	
Minnesota	1
Anthrax	
New York	2
Chicken pox	
Illinois	1,869
Iowa	299
Louisiana	14
Maryland	501
Michigan	1,212
Minnesota	1,121
New York	2,616
North Dakota	146
Ohio	2,376
Wisconsin	1,503
Wyoming	115
Dysentery	
Illinois	23
Louisiana	5
Maryland	9
Michigan	1
Minnesota	4
New York	3
Wyoming	1
German measles	
Illinois	30
Iowa	1
Maryland	11
New York	243
North Dakota	21
Ohio	9
Wisconsin	22
Hookworm disease	
Louisiana	15
Minnesota	1
Impetigo contagiosa	
Maryland	8
Lead poisoning	
Illinois	22
Ohio	10
Lethargic encephalitis	
Illinois	6
Louisiana	1
Maryland	6
Michigan	6
Minnesota	4
New York	14
North Dakota	1
Ohio	4
Wisconsin	1
Mumps	
Illinois	239
Iowa	21
Louisiana	2
Maryland	43
Michigan	132
New York	911
North Dakota	11
Ohio	207
Wisconsin	461
Wyoming	17
Ophthalmia neonatorum	
Illinois	42
Iowa	1
Maryland	1
New York	2
Ohio	107
Paratyphoid fever	
Illinois	3
Minnesota	1
New York	8
Ohio	2
Wyoming	1
Puerperal septicemia	
Illinois	6
New York	9
Rabies in animals	
Maryland	6

Rabies in man:	Cases
Ohio	1
Septic sore throat	
Illinois	4
Maryland	14
Michigan	21
New York	12
Ohio	5
Wyoming	1
Tetanus	
Illinois	2
Minnesota	1
New York	8
Trachoma:	
Iowa	1
Ohio	3
Tularæmia:	
Illinois	1

Typhus fever:	Cases
Illinois	1
Maryland	1
Vincent's angina	
Maryland	2
New York	59
Whooping cough	
Illinois	958
Iowa	25
Louisiana	13
Maryland	298
Michigan	403
Minnesota	96
New York	1,252
North Dakota	23
Ohio	938
Wisconsin	910
Wyoming	55

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of November, 1926, to other State health departments by departments of health of certain States

Referred by—	Actinomycosis	Blastomycosis	Chicken pox	Diphtheria	Dysentery	Measles	Poliomyelitis	Smallpox	Tuberculosis	Typhoid fever
California									2	
Illinois								2	24	8
New Jersey										1
New York				3		2	1			6
Minnesota	1	1	1		3				28	1

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended December 11, 1926, 39 States reported 2,143 cases of diphtheria. For the week ended December 12, 1925, the same States reported 1,679 cases of this disease. One hundred cities, situated in all parts of the country and having an aggregate population of more than 30,360,000, reported 1,169 cases of diphtheria for the week ended December 11, 1926. Last year for the corresponding week they reported 911 cases. The estimated expectancy for these cities was 1,350 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-seven States reported 5,089 cases of measles for the week ended December 11, 1926, and 4,561 cases of this disease for the week ended December 12, 1925. One hundred cities reported 1,160 cases of measles for the week this year and 2,451 cases last year.

Poliomyelitis.—The health officers of 39 States reported 29 cases of poliomyelitis for the week ended December 11, 1926. The same States reported 41 cases for the week ended December 12, 1925.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-nine States—this year, 3,576 cases; last year, 3,203 cases; 100 cities—this year, 1,387 cases; last year, 1,280 cases; estimated expectancy, 1,062 cases.

Smallpox.—For the week ended December 11, 1926, 38 States reported 667 cases of smallpox Last year for the corresponding week they reported 365 cases One hundred cities reported smallpox for the week as follows: 1926, 65 cases, 1925, 119 cases; estimated expectancy, 69 cases No deaths from smallpox were reported by these cities for the week this year

Typhoid fever.—Three hundred and eighty-four cases of typhoid fever were reported for the week ended December 11, 1926, by 39 States For the corresponding week of 1925 the same States reported 444 cases of this disease Ninety-nine cities reported 61 cases of typhoid fever for the week this year and 111 cases for the corresponding week last year. The estimated expectancy for these cities was 87 cases.

Influenza and pneumonia —Deaths from influenza and pneumonia were reported for the week by 94 cities, with a population of more than 29,600,000, as follows: 1926, 830 deaths; 1925, 799 deaths.

City reports for week ended December 11, 1926

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics It is based on reports to the Public Health Service during the past nine years It is in most instances the median number of cases reported in the corresponding week of the preceding years When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1917 is included In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviations from the usual trend For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine									
Portland	75,333	22	2	0	0	0	0	1	4
New Hampshire									
Concord	22,546	0	1	0	0	0	26	0	0
Manchester	83,097	0	5	0	0	0	6	0	2
Vermont:									
Barre	10,008	3	0	0	0	0	21	0	1
Massachusetts.									
Boston	779,620	143	64	37	1	2	14	52	23
Fall River	128,993	5	5	4	1	0	1	4	0
Springfield	142,065	9	5	7	2	0	4	1	0
Worcester	190,757	27	5	0	0	1	1	3	9
Rhode Island.									
Pawtucket	69,760	6	2	5	0	0	0	0	0
Providence	267,918	0	10	8	0	0	1	0	7
Connecticut:									
Bridgeport	(1)	2	11	4	2	1	1	2	4
Hartford	160,197	6	9	3	0	0	0	0	5
New Haven	178,927	26	4	1	0	0	1	1	4

[1] No estimate made.

City reports for week ended December 11, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MIDDLE ATLANTIC									
New York									
Buffalo	538,016	27	26	16		0	3	7	15
New York	5,873,356	237	227	194	77	16	13	172	137
Rochester	316,786	5	9	7	5	2	1	1	10
Syracuse	132,003	20	10	0		0	18	8	0
New Jersey									
Camden	128,642	8	6	18	0	0	0	1	0
Newark	452,513	25	20	12	6	0	1	8	9
Trenton	132,020	6	8	2	0	0	0	0	1
Pennsylvania									
Philadelphia	1,979,364	165	85	48	1	5	3	21	62
Pittsburgh	631,563	100	29	22	1	1	2	2	23
Reading	112,707	13	5	3		0	0	1	3
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409,333	35	20	12	0	3	1	24	10
Cleveland	936,485	103	47	101	2	5	8	0	22
Columbus	279,836	18	8	13	0	1	1	0	6
Toledo	287,380	81	17	9	0	0	8	0	5
Indiana									
Fort Wayne	97,846	9	5	6	0	0	3	0	3
Indianapolis	358,819	62	13	22	0	0	1	0	16
South Bend	80,091	4	2	5	0	0	21	0	2
Terre Haute	71,071	6	3	0	0	0	0	0	1
Illinois									
Chicago	2,995,239	201	148	52	13	5	184	65	47
Peoria	81,564	12	3	1	0	0	85	10	3
Springfield	63,923	20	2	4	0	0	68	0	3
Michigan:									
Detroit	1,245,824	121	72	82	1	5	6	28	21
Flint	130,316	25	14	4	0	0	1	0	3
Grand Rapids	153,698	15	6	0	1	1	0	0	3
Wisconsin:									
Kenosha	50,891	34	2	1	0	0	7	2	0
Madison	46,385	37	1	1	0	0	16	0	0
Milwaukee	509,192	88	30	22	1	0	10	51	11
Racine	67,707	27	3	2	0	0	0	5	0
Superior	39,671	1	1	1	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota									
Duluth	110,502	10	2	0	0	0	38	0	1
Minneapolis	425,435	198	26	33	0	2	0	0	8
St. Paul	246,001	33	21	3	0	0	7	0	12
Iowa									
Davenport	52,469	2	2	0	0		6	0	
Des Moines	141,441	0	6	1	0		0	0	
Sioux City	76,411	17	3	1	0		0	0	
Waterloo	36,771	44	1	0	0		0	0	
Missouri									
Kansas City	367,481	56	14	9	3	3	2	0	17
St. Joseph	78,342	3	4	1	0	0	0	0	5
St. Louis	821,543	49	59	44	1	2	8	5	
North Dakota									
Fargo	26,403	4	0	0	0	0	3	0	2
Grand Forks	14,811	1	0	0	0		29	0	
South Dakota									
Aberdeen	15,036	25	1	0	0		2	0	
Sioux Falls	30,127	1	0	0	0		0	0	
Nebraska									
Lincoln	60,941	9	2	0	0	0	2	0	2
Omaha	211,768	10	6	5	0	0	5	13	10
Kansas									
Topeka	55,411	3	3	0	0	0	1	0	0
Wichita	88,367	25	8	0	0	0	0	1	1

City reports for week ended December 11, 1926—Continued

Division, State, and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria: Cases, estimated expectancy	Diphtheria: Cases reported	Influenza: Cases reported	Influenza: Deaths reported	Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
SOUTH ATLANTIC									
Delaware									
Wilmington	122,049	2	4	1	0	0	1	0	1
Maryland									
Baltimore	796,[illegible]96	102	36	33	20	3	2	8	32
Cumberland	33,741	4	2	1	0	0	0	1	0
Frederick	12,035	12	1	1	0	0	0	0	0
District of Columbia									
Washington	497,906	52	24	23	0	2	0	0	12
Virginia:									
Lynchburg	30,395	6	2	2	0	0	1	1	2
Norfolk	(1)	0	4	3	0	0	0	0	5
Richmond	186,403	3	13	17	0	2	9	1	4
Roanoke	58,208	2	4	4	0	2	0	0	2
West Virginia									
Charleston	49,019	14	3	4	1	0	0	0	0
Huntington	63,485	0	2	1	0	0	0	0	1
Wheeling	56,208	14	3	3	0	0	0	1	2
North Carolina									
Raleigh	30,371	6	2	3	0	0	0	0	1
Wilmington	37,061	8	1	2	0	0	0	0	1
Winston-Salem	69,031	2	2	6	0	0	0	0	4
South Carolina									
Charleston	73,125	0	2	0	15	1	0	0	3
Columbia	41,225	3	1	1	0	0	1	0	0
Greenville	27,311	8	0	2	0	0	0	0	1
Georgia:									
Atlanta	(1)	4	5	18	22	6	7	0	5
Brunswick	16,809	4	0	0	0	0	0	0	0
Savannah	93,134	1	2	1	14	2	0	0	5
Florida:									
Miami	69,754	6	------	2	1	0	1	0	3
St. Petersburg	26,847	------	1	------	------	0	------	------	1
Tampa	94,743	1	2	2	0	0	8	0	2
EAST SOUTH CENTRAL									
Kentucky									
Covington	58,309	------	3	------	------	------	------	------	------
Louisville	305,945	14	13	8	1	2	1	0	12
Tennessee									
Memphis	174,533	13	10	6	0	3	[illegible]	0	6
Nashville	136,220	3	5	14	0	0	0	0	5
Alabama									
Birmingham	205,670	18	6	11	7	3	0	2	6
Mobile	65,955	0	[illegible]	3	0	0	6	0	2
Montgomery	46,481	15	1	8	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas									
Fort Smith	31,643	0	2	5	0	------	0	5	------
Little Rock	74,216	4	2	1	0	------	1	0	2
Louisiana									
New Orleans	414,493	1	12	13	10	6	30	0	13
Shreveport	57,857	10	1	4	0	0	1	5	4
Oklahoma									
Oklahoma City	(1)	0	3	0	0	0	0	0	3
Texas									
Dallas	194,450	4	12	21	1	1	0	0	2
Galveston	48,375	0	1	0	0	0	0	0	3
Houston	164,954	3	5	8	0	1	0	0	5
San Antonio	198,069	0	4	10	0	1	2	0	5
MOUNTAIN									
Montana									
Billings	17,971	2	0	0	0	0	39	0	0
Great Falls	29,883	14	0	0	0	1	3	0	0
Helena	12,037	0	0	0	0	0	1	0	0
Missoula	12,668	2	0	1	0	0	0	3	0
Idaho:									
Boise	23,042	4	0	0	0	0	11	0	0

[1] No estimate made

City reports for week ended December 11, 1926—Continued

Division, State and city	Population July 1, 1925, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MOUNTAIN—continued									
Colorado									
Denver	280,911	15	13	15	-------	3	30	0	7
Pueblo	43,787	6	5	0	0	0	0	0	0
New Mexico									
Albuquerque	21,000	4	1	0	0	0	5	1	0
Arizona									
Phoenix	38,669	0	0	0	0	0	0	0	2
Utah									
Salt Lake City	130,948	[illegible]	4	10	0	0	269	1	5
Nevada									
Reno	12,665	1	0	1	0	0	0	0	0
PACIFIC									
Washington									
Seattle	(1)	55	7	9	0	-------	9	27	-------
Spokane	108,897	38	5	1	0	-------	97	36	-------
Tacoma	104,455	14	3	7	0	0	0	0	2
Oregon									
Portland	282,383	11	10	13	0	0	6	1	10
California									
Los Angeles	(1)	80	37	56	23	3	13	10	25
Sacramento	72,260	7	3	2	0	0	33	22	3
San Francisco	557,530	32	19	14	2	0	77	38	2

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine											
Portland	2	3	0	0	0	0	0	0	0	21	29
New Hampshire											
Concord	0	4	0	0	0	0	0	0	0	0	13
Manchester	2	3	0	0	0	1	0	0	0	0	16
Vermont											
Barre	1	0	0	0	0	1	0	0	0	1	4
Massachusetts											
Boston	43	78	0	0	0	15	1	0	0	33	226
Fall River	2	1	0	0	0	4	1	0	0	0	26
Springfield	8	8	0	0	0	0	0	0	0	1	23
Worcester	11	16	0	0	0	4	0	0	0	4	42
Rhode Island											
Pawtucket	1	1	0	0	0	0	0	0	0	2	15
Providence	6	5	0	0	0	1	1	0	0	5	57
Connecticut											
Bridgeport	7	20	0	0	0	0	0	0	0	4	29
Hartford	6	6	0	0	0	1	1	0	0	1	33
New Haven	7	2	0	0	0	1	1	1	0	0	37
MIDDLE ATLANTIC											
New York											
Buffalo	22	15	1	0	0	9	2	0	1	8	116
New York	153	201	0	2	0	91	18	14	3	49	1,484
Rochester	12	14	0	0	0	5	1	14	4	4	96
Syracuse	12	15	0	0	0	1	1	0	0	9	44
New Jersey											
Camden	3	5	0	0	0	1	0	1	0	0	34
Newark	16	26	0	0	0	5	1	2	0	26	114
Trenton	3	1	0	0	0	5	1	0	0	5	35
Pennsylvania											
Philadelphia	66	66	0	0	0	30	4	4	0	39	521
Pittsburgh	36	12	0	0	0	6	1	0	0	10	148
Reading	1	1	0	0	0	0	0	1	0	6	30

[1] No estimate made

[2] Pulmonary tuberculosis only

City reports for week ended December 11, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	13	24	0	0	0	14	1	0	0	0	152
Cleveland	33	25	0	2	0	17	2	1	0	11	180
Columbus	12	14	0	0	0	2	0	0	0	0	82
Toledo	13	10	0	0	0	5	0	0	0	27	65
Indiana:											
Fort Wayne	2	1	0	0	0	3	1	1	0	0	22
Indianapolis	12	17	4	7	0	7	0	1	0	10	107
South Bend	3	4	0	0	0	2	0	0	0	0	12
Terre Haute	3	3	0	0	0	1	0	0	0	0	17
Illinois:											
Chicago	117	100	1	0	0	38	7	1	0	50	657
Peoria	6	0	0	0	0	0	0	0	0	3	27
Springfield	2	1	0	0	0	1	1	0	0	9	23
Michigan:											
Detroit	85	96	2	0	0	23	3	1	2	52	290
Flint	8	21	0	1	0	2	1	0	0	4	30
Grand Rapids	8	12	0	0	0	0	1	0	0	0	42
Wisconsin:											
Kenosha	1	5	1	0	0	0	0	0	0	9	5
Madison	2	6	0	0	0	0	0	0	0	0	5
Milwaukee	26	18	2	0	0	6	1	0	0	59	121
Racine	4	2	1	0	0	0	0	0	0	2	11
Superior	2	2	1	0	0	1	0	0	0	0	11
WEST NORTH CENTRAL											
Minnesota:											
Duluth	6	11	1	0	0	2	0	0	0	1	21
Minneapolis	47	79	4	0	0	1	1	0	0	2	99
St. Paul	30	28	10	2	0	1	1	1	0	5	55
Iowa:											
Davenport	1	2	1	0			0	0		0	
Des Moines	7	1	0	0			0	0		0	1
Sioux City	3	10	1	2			0	0		2	
Waterloo	3	1	0	0			0	0		2	
Missouri:											
Kansas City	11	23	0	2	0	10	1	0	0	2	97
St. Joseph	3	2	0	0	0	2	0	0	0	0	28
St. Louis	34	39	0	1	0	4	2	1	0	25	237
North Dakota:											
Fargo	2	0	0	0	0	0	0	0	0	0	6
Grand Forks	0	0	1	0			0	0		0	
South Dakota:											
Aberdeen	1	18	0	0			0	0		4	
Sioux Falls	2	0	1	0			0	0		0	
Nebraska:											
Lincoln	2	4	0	0	0	0	0	0	0	0	16
Omaha	5	11	4	0	0	1	1	0	0	0	49
Kansas:											
Topeka	2	2	0	12	0	0	0	0	0	2	10
Wichita	3	8	0	0	0	1	0	0	1	0	23
SOUTH ATLANTIC											
Delaware:											
Wilmington	3	18	0	0	0	1	1	0	0	1	30
Maryland:											
Baltimore	23	22	1	0	0	14	3	3	0	53	216
Cumberland	0	1	1	0	0	0	1	1	0	4	10
Frederick	1	1	0	0	0	1	1	0	0	5	6
District of Columbia:											
Washington	20	8	0	0	0	9	4	1	1	8	136
Virginia:											
Lynchburg	0	7	0	0	0	0	0	0	0	0	15
Norfolk	2	0	0	0	0	2	0	1	0	3	
Richmond	6	6	0	0	0	3	1	1	0	0	59
Roanoke	1	4	0	1	0	1	1	0	0	0	20

City reports for week ended December 11, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
SOUTH ATLANTIC—continued											
West Virginia											
Charleston	1	2	1	0	0	0	0	1	0	0	11
Huntington	1	1	0	0	0	3	0	0	0	0	13
Wheeling	2	0	0	0	0	0	1	1	0	5	16
North Carolina											
Raleigh	1	1	0	0	0	1	0	0	0	20	14
Wilmington	0	0	0	0	0	1	0	0	0	2	11
Winston-Salem	2	3	1	0	0	1	0	0	0	4	17
South Carolina											
Charleston	1	0	0	0	0	1	0	2	0	0	27
Columbia	0	0	0	0	0	0	0	0	0	0	-------
Greenville	0	1	0	0	0	0	0	0	0	4	5
Georgia											
Atlanta	5	15	1	8	0	5	1	2	1	4	65
Brunswick	0	0	0	0	0	0	0	0	0	0	3
Savannah	1	2	1	1	0	2	1	0	0	1	26
Florida											
Miami	-------	1	-------	0	0	0	-------	1	1	1	34
St. Petersburg	1	-------	0	-------	0	0	0	-------	0	-------	15
Tampa	0	2	0	0	0	2	0	0	1	0	26
EAST SOUTH CENTRAL											
Kentucky											
Covington	2	-------	0	-------	-------	-------	0	-------	-------	-------	-------
Louisville	5	6	0	1	0	1	1	1	0	14	92
Tennessee											
Memphis	5	11	0	1	0	2	1	5	1	32	53
Nashville	3	6	1	0	0	6	1	2	0	0	42
Alabama											
Birmingham	4	4	1	0	0	4	2	0	0	4	54
Mobile	1	0	0	2	0	1	0	0	0	0	18
Montgomery	1	0	1	0	0	0	0	0	0	0	28
WEST SOUTH CENTRAL											
Arkansas											
Fort Smith	1	0	0	0	-------	-------	0	0	-------	0	-------
Little Rock	2	1	0	0	-------	3	1	0	-------	0	-------
Louisiana											
New Orleans	6	9	0	0	0	8	1	0	0	0	119
Shreveport	1	2	1	0	0	0	1	0	0	0	16
Oklahoma											
Oklahoma City	3	1	0	0	0	2	0	0	0	0	27
Texas											
Dallas	4	9	0	1	0	3	1	0	0	0	43
Galveston	0	7	0	0	0	0	0	1	0	0	12
Houston	2	4	1	1	0	9	0	0	0	0	63
San Antonio	1	1	0	0	0	9	1	2	0	0	55
MOUNTAIN											
Montana											
Billings	1	0	0	0	0	0	0	0	0	0	7
Great Falls	2	3	1	0	0	0	0	0	0	0	6
Helena	0	1	0	0	0	0	0	0	0	0	-------
Missoula	1	5	1	0	0	0	0	0	0	0	7
Idaho											
Boise	1	3	1	1	0	0	0	0	0	0	3
Colorado											
Denver	10	73	4	0	0	13	0	0	1	1	83
Pueblo	2	1	1	0	0	0	0	1	0	0	15
New Mexico											
Albuquerque	0	1	0	0	0	4	0	0	0	0	12
Arizona											
Phoenix	2	0	0	0	0	8	0	0	1	0	21
Utah											
Salt Lake City	3	2	2	1	0	1	0	0	0	0	34
Nevada											
Reno	0	0	0	0	0	0	0	0	0	0	6

City reports for week ended December 11, 1926—Continued

Division, State, and city	Scarlet fever: Cases, estimated expectancy	Scarlet fever: Cases reported	Smallpox: Cases, estimated expectancy	Smallpox: Cases reported	Smallpox: Deaths reported	Tuberculosis, deaths reported	Typhoid fever: Cases, estimated expectancy	Typhoid fever: Cases reported	Typhoid fever: Deaths reported	Whooping cough, cases reported	Deaths, all causes
PACIFIC											
Washington:											
Seattle	7	8	3	0			0	2		0	
Spokane	6	24	3	2			1	0		9	
Tacoma	3	6	3	12	0	1	0	1	0	0	27
Oregon:											
Portland	7	24	6	5	0	7	0	1	0	0	87
California:											
Los Angeles	20	34	4	1	0	22	2	2	0	5	257
Sacramento	2	2	2	1	0	2	0	0	0	0	21
San Francisco	10	12	1	0	0	8	1	1	0	11	157

Division, State, and city	Cerebrospinal meningitis: Cases	Cerebrospinal meningitis: Deaths	Lethargic encephalitis: Cases	Lethargic encephalitis: Deaths	Pellagra: Cases	Pellagra: Deaths	Poliomyelitis (infantile paralysis): Cases, estimated expectancy	Poliomyelitis: Cases	Poliomyelitis: Deaths
NEW ENGLAND									
Massachusetts:									
Boston	1	0	0	0	0	0	1	0	0
Fall River	0	1	0	0	0	0	0	0	0
Rhode Island:									
Pawtucket	0	0	0	0	0	0	0	1	0
Providence	0	0	0	0	0	0	0	1	0
MIDDLE ATLANTIC									
New York:									
New York	4	0	3	2	0	1	2	1	1
Rochester	0	0	0	0	0	0	0	1	0
New Jersey:									
Newark	0	0	0	0	0	0	1	1	0
Pennsylvania:									
Pittsburgh [1]	0	1	0	0	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio:									
Cleveland	1	0	0	0	0	0	0	1	0
Columbus	0	0	0	0	0	0	0	0	1
Illinois:									
Chicago	2	0	1	0	0	0	1	1	0
Michigan:									
Detroit	1	0	2	0	0	0	1	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	1	0	0	0	0	0	0	0	0
Missouri:									
St. Louis	2	1	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	0	0	2	1	0	0	0	0	1
Virginia:									
Norfolk	0	0	1	0	0	0	0	0	0
North Carolina:									
Wilmington	0	0	0	0	0	1	0	0	0
South Carolina:									
Charleston	0	0	0	0	1	0	0	0	0
Georgia:									
Atlanta	0	0	0	0	1	0	0	0	0

[1] Rabies (human); 1 death at Pittsburgh, Pa.

City reports for week ended December 11, 1926—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	1	1	0	0	0	0	0	0	0
Nashville	0	0	0	0	0	0	0	1	0
Alabama:									
Birmingham	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
Shreveport	0	0	0	0	0	1	0	0	0
Texas:									
Galveston	0	0	0	0	0	1	0	0	0
MOUNTAIN									
Montana:									
Missoula	1	0	0	0	0	0	0	0	0
New Mexico:									
Albuquerque	0	0	0	0	0	0	0	1	1
PACIFIC									
Washington:									
Spokane	1	0	0	0	0	0	0	0	0
California:									
Los Angeles	0	0	0	0	0	0	0	1	0
San Francisco	0	0	1	0	0	0	1	1	0

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended December 11, 1926, compared with those for a like period ended December 12, 1925. The population figures used in computing the rates are approximate estimates as of July 1, 1925 and 1926, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had an estimated aggregate population of nearly 30,000,000 in 1925 and nearly 30,500,000 in 1926. The 95 cities reporting deaths had more than 29,200,000 estimated population in 1925 and more than 29,730,000 in 1926 The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, November 7 to December 11, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Nov. 14, 1925	Nov 13, 1926	Nov 21 1925	Nov 20, 1926	Nov 28, 1925	Nov. 27, 1926	Dec 5, 1925	Dec 4, 1926	Dec 12, 1925	Dec 11, 1926
101 cities	169	229	176	230	154	212	165	[2] 225	159	[3] 201
New England	122	135	139	139	101	132	120	173	103	163
Middle Atlantic	140	162	143	159	150	154	137	176	138	160
East North Central	185	264	180	292	155	257	164	267	158	223
West North Central	235	222	221	213	170	191	272	[2] 221	239	193
South Atlantic	236	391	271	278	207	284	207	242	192	239
East South Central	63	265	121	368	110	218	116	301	121	[3] 275
West South Central	203	379	167	327	172	331	264	318	176	267
Mountain	240	182	305	146	129	200	231	228	166	246
Pacific	138	232	177	326	157	305	122	270	191	240

MEASLES CASE RATES

101 cities	169	105	222	135	205	133	342	[2] 177	427	[3] 199
New England	903	31	1,090	47	798	57	1,526	102	1,953	165
Middle Atlantic	170	44	255	28	238	30	338	37	451	23
East North Central	84	100	97	121	118	131	243	145	293	218
West North Central	10	147	14	197	29	109	18	[2] 127	25	129
South Atlantic	217	24	271	54	330	23	516	49	539	54
East South Central	16	10	47	31	32	16	37	26	21	[3] 83
West South Central	9	26	9	26	4	103	4	142	4	146
Mountain	46	1,529	28	1,948	9	2,540	9	2,840	37	3,214
Pacific	19	280	30	491	25	340	55	704	52	617

SCARLET FEVER CASE RATES

101 cities	182	207	178	213	197	215	211	[2] 242	223	[3] 238
New England	237	352	201	331	206	286	216	326	187	340
Middle Atlantic	142	125	143	129	149	137	166	156	172	177
East North Central	180	185	187	202	210	202	261	239	288	236
West North Central	354	346	401	407	438	411	405	[2] 459	476	431
South Atlantic	161	178	115	145	134	158	119	182	152	175
East South Central	168	296	126	228	168	239	163	244	110	[3] 149
West South Central	114	142	88	116	132	198	106	211	141	142
Mountain	176	701	157	637	166	783	240	929	157	801
Pacific	196	280	188	337	237	251	215	267	185	232

SMALLPOX CASE RATES

101 cities	8	5	16	5	16	5	13	[2] 14	21	[3] 11
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	1	0	1
East North Central	13	10	31	3	31	7	13	21	33	7
West North Central	4	10	16	4	10	30	18	[2] 57	18	38
South Atlantic	6	2	19	4	2	4	4	19	8	19
East South Central	32	10	11	0	11	5	11	0	5	[3] 22
West South Central	0	30	0	4	9	4	13	9	9	9
Mountain	18	9	18	0	9	0	0	18	102	18
Pacific	41	5	75	49	94	5	105	35	124	43

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1925 and 1926, respectively.
[2] Kansas City, Mo., not included
[3] Covington, Ky., not included

Summary of weekly reports from cities, November 7 to December 11, 1926—Annual rates per 100,000 population, compared with rates for the corresponding period of 1925—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Nov 14, 1925	Nov 13, 1926	Nov. 21, 1925	Nov 20, 1926	Nov. 28, 1925	Nov 27, 1926	Dec 5, 1925	Dec 4, 1926	Dec 12, 1925	Dec 11, 1926
101 cities	11	21	17	16	13	12	19	[2] 10	20	[4] 11
New England	2	9	31	7	17	7	22	7	22	2
Middle Atlantic	8	21	20	21	14	13	26	9	25	[5] 11
East North Central	9	10	3	5	3	4	8	6	12	3
West North Central	16	16	14	6	8	8	10	[2] 9	12	4
South Atlantic	10	36	29	23	27	19	19	17	23	24
East South Central	42	52	32	36	21	31	53	42	26	[3] 44
West South Central	57	34	31	13	31	17	40	9	31	13
Mountain	9	27	18	27	18	18	0	9	18	9
Pacific	3	30	6	30	14	22	14	16	14	16

INFLUENZA DEATH RATES

	Nov 14, 1925	Nov 13, 1926	Nov. 21, 1925	Nov 20, 1926	Nov. 28, 1925	Nov 27, 1926	Dec 5, 1925	Dec 4, 1926	Dec 12, 1925	Dec 11, 1926
95 cities	11	14	8	10	9	10	11	[2] 14	13	[3] 17
New England	7	2	2	2	12	9	10	7	10	9
Middle Atlantic	14	10	6	10	8	7	10	13	12	12
East North Central	10	10	6	10	5	9	6	9	11	14
West North Central	13	13	2	6	2	2	6	[2] 2	6	15
South Atlantic	2	17	13	8	10	15	17	21	8	34
East South Central	26	26	42	31	26	42	42	42	47	[3] 44
West South Central	29	71	10	33	34	33	39	43	44	43
Mountain	0	27	18	9	9	46	18	46	18	36
Pacific	1	14	18	4	4	0	4	11	4	11

PNEUMONIA DEATH RATES

	Nov 14, 1925	Nov 13, 1926	Nov. 21, 1925	Nov 20, 1926	Nov. 28, 1925	Nov 27, 1926	Dec 5, 1925	Dec 4, 1926	Dec 12, 1925	Dec 11, 1926
95 cities	132	106	146	123	126	126	144	[2] 123	130	[3] 129
New England	120	90	139	104	156	132	180	118	132	135
Middle Atlantic	143	114	160	135	145	138	161	150	132	139
East North Central	131	85	139	106	95	99	142	87	116	103
West North Central	81	76	101	120	81	74	54	[2] 72	84	118
South Atlantic	152	139	146	143	134	165	159	105	173	154
East South Central	163	166	221	171	179	104	131	135	184	[3] 171
West South Central	102	113	155	156	150	213	155	161	208	151
Mountain	176	155	222	109	157	146	157	209	176	109
Pacific	109	99	87	75	98	124	98	153	76	114

[2] Kansas City, Mo, not included.
[3] Covington, Ky, not included
[4] Rochester, N. Y, and Covington, Ky, not included.
[5] Rochester, N Y, not included

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1925 and 1926, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1925	1926	1925	1926
Total	101	95	29,900,058	30,427,598	29,221,531	29,733,613
New England	12	12	2,176,124	2,206,124	2,176,124	2,206,124
Middle Atlantic	10	10	10,346,970	10,476,970	10,346,970	10,476,970
East North Central	16	16	7,481,656	7,655,436	7,481,656	7,655,436
West North Central	12	10	2,550,024	2,589,131	2,431,253	2,468,448
South Atlantic	21	21	2,716,070	2,776,070	2,716,070	2,776,070
East South Central	7	7	993,103	1,004,953	993,103	1,004,953
West South Central	8	6	1,184,057	1,212,057	1,078,198	1,103,895
Mountain	9	9	563,912	572,773	563,912	572,773
Pacific	6	4	1,888,142	1,934,084	1,434,245	1,469,144

FOREIGN AND INSULAR

PLAGUE ON VESSEL

Steamship "Dacia"—At Haifa, Syria—On November 17, 1926, a case of plague was reported on the steamship *Dacia* at Haifa, Syria, occurring in a seaman. The vessel came from Rumania.

BERMUDA

Leprosy—Care and treatment of patients.—Reports of leprosy in the island of Bermuda, received under date of December 10, 1926, show for September, 1925, 8 lepers present, 3 male, 5 female, and for September, 1926, 9 lepers, 3 male and 6 female; one man and one woman, white, the remaining cases, colored. The isolation hospital not being equipped for the treatment of these cases, the lepers are cared for mainly by the parishes in which they reside and where they are segregated. The treatment includes administration of chaulmestrol.

CANADA

Communicable diseases—Week ended December 4, 1926.—The Canadian Ministry of Health reports cases of certain communicable diseases in seven Provinces of Canada for the week ended December 4, 1926, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Influenza	27							27
Smallpox				11	2	20	6	39
Typhoid fever	2	4	9	12	2	1	3	33

CHINA

Plague—Mongolia.—Information received under date of December 18, 1926, shows epidemic pneumonic plague present at Urga and Sanbese, Mongolia. Prophylactic measures were stated to have been put in force at Manchuria Station, on the South Manchuria Railway.

EGYPT

Plague—November 12–18, 1926.—During the week ended November 18, 1926, 1 case of plague, occurring in the district of Tantah, was reported in Egypt, making a total from January 1 to November 18, 1926, of 143 cases as compared with 137 cases reported for the corresponding period of 1925.

Alexandria—November 23, 1926.—On November 23, 1926, a case of bubonic plague was reported at Alexandria

Gharbieh.—From November 22 to 23, 1926, 2 cases of plague with 1 death were reported at Tanta, Province of Gharbieh.

FRENCH SUDAN

Yellow fever—Segou—November 23, 1926.—Under date of November 23, 1926, a fatal case of yellow fever was reported at Segou, French Sudan, West Africa.

GREECE

Plague—Patras—November 9–13, 1926.—Three cases of plague have been reported at Patras, Greece, occurring November 9, 11, and 13, respectively.

Typhus fever.—During the month of October, 1926, 7 cases of typhus fever with 1 death were reported in Greece.

MADAGASCAR

Plague—October 1 to 15, 1926.—During the two weeks ended October 15, 1926, 121 cases of plague with 111 deaths were reported in the island of Madagascar. The occurrence was distributed according to provinces as follows: Maevatanana, cases 17, deaths 17; Majunga, cases 6, deaths 2, Moramanga, cases 18, deaths, 18, Tamatave, cases 1, deaths 1; Tananarive (town), cases 16; deaths 14; other localities, cases 63, deaths 59.

Deaths among Europeans.—Of the 14 deaths from plague reported in the town of Tananarive 3 deaths were in Europeans, making a total of 5 deaths of Europeans from plague since August ,1926.

MEXICO

Malaria—Vicinity of Vera Cruz.—Information received from Vera Cruz under date of December 8, 1926, shows malaria present at Palmar, a small locality in the vicinity of Vera Cruz, with 2 fatalities reported to November 10, 1926. A physician of the State medical service has been in charge of the situation since that date. It was stated that at the outset he treated daily from 100 to 120 cases of malaria, with a few cases of dysentery. Population of Palmar, 350, including residents of near-by ranches.

SENEGAL

Further relative to plague—November 22, 1926.—Under date of November 23, 1926, 2 new cases of bubonic plague were reported in the interior of Senegal, West Africa. The cases occurred in natives and in the district of Diourbel.

Yellow fever.—Yellow fever was reported in Senegal, November 23, 1926, as follows: Four cases with 4 deaths, 1 case occurring in the

district of Kolda (Casamance) and 3 cases in the district of Sine Saloum. Of these cases, 3 were in Syrians and 1 in a European

UNION OF SOUTH AFRICA

Plague—Cape Province—October 31—November 6, 1926.—During the week ended November 6, 1926, a case of plague, occurring in a native on a farm in Colesberg district, was reported in the Cape Province, Union of South Africa

Smallpox—Natal—During the same period 7 additional cases of smallpox were reported at Durban, Natal, making a total of 49 cases with 9 deaths reported to date, occurring in Hindus or natives.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given

Reports Received During Week Ended December 31, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China				
Amoy	Oct 31-Nov 6	1		
India				
Calcutta	Oct 24-30	18	11	
Rangoon	Oct 31-Nov 6	1	1	
Persia				
Teheran	Aug 23-Sept 23	1		

PLAGUE

Place	Date	Cases	Deaths	Remarks
China				
Mongolia—				
Sanbese	Dec 18			Epidemic pneumonic
Urga	do			Do
Egypt				Jan 1-Nov 18, 1926 Cases, 143 Corresponding period, 1925 Cases, 137
Garbieh Province	Nov 22-23	2	1	
Tantah District	Nov. 12-18	1		
City—				
Alexandria	Nov 23	1		
Greece				
Patras	Nov 9-13	3		
India				
Madras Presidency	Oct 17-23	97	55	
Rangoon	Oct 31-Nov 6	3	4	
Java				
Batavia	do	5	4	Province
Madagascar				Oct 1-15, 1926 Cases, 121, deaths, 111
Maevatanana	Oct 1-15	17	17	Bubonic, pneumonic, septicemic
Majunga	do	6	2	Bubonic
Moramanga	do	18	18	Bubonic, septicemic
Tamatave	do	1	1	Bubonic.
Tananarive (Town)	do	16	14	Bubonic, pneumonic, septicemic Of the deaths, 3 were in Europeans, total European deaths of plague from August, 1926, 5.
Other localities	do	63	59	Bubonic, pneumonic, septicemic.
Senegal	Nov 23	2		
Union of South Africa.				
Cape Province—				
Colesberg District	Oct 31-Nov 6	1		
On vessel.				
Steamship Dacia	Nov. 17	1		At Haifa, Syria Seaman on Rumanian steamship.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received During Week Ended December 31, 1926—Continued

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	Nov 1-10	1		
Constantine	Nov 24	44		Eastern department.
Brazil				
Bahia	Oct 24-30	6	2	
British South Africa				
Northern Rhodesia	Oct 30-Nov 5	1		
Canada				
Alberta	Nov 28-Dec 4	6		
Manitoba	do	2		
Ontario	do	11		
Toronto	Dec 5-11	3		
Saskatchewan	Nov 28-Dec 4	20		
France				
Paris	Nov 11-20	4	1	
India:				
Calcutta	Oct 24-30	4	4	
Madras	Nov 7-13	3		
Java				
Batavia	Oct 31-Nov 6	5		
Surabaya	Oct 17-23	4	1	For East Java and Madura.
Mexico				
Ciudad Juarez	Dec 7-13	1		
Mexico City	Nov 28-Dec 4	2		Including municipalities in Federal District
Torreon	Nov 21-27		1	
Persia				
Teheran	Aug 23-Sept 23		4	
Poland				Sept. 27-Oct 9, 1926 One case.
Portugal				
Lisbon	Nov 21-27	5		
Union of South Africa				
Natal—				
Durban	Oct. 10-Nov. 6	50	10	
Polela	Oct 31-Nov 6			Outbreak. In Nkandhla District
Transvaal—				
Johannesburg	Nov 7-13	1		

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Chosen				
Seoul	Oct. 25-31	1		
Greece				Oct., 1926: Cases, 7; deaths, 1.
Ireland (Irish Free State):				
Ennistymon	July 4-10	5		
Mexico:				
Mexico City	Nov 28-Dec 4	10		Including municipalities in Federal district.
Palestine.				
Haifa	Nov 9-15	1		
Persia				
Teheran	Aug 23-Sept. 23		2	
Poland	Sept 27-Oct 16	52	5	
Krakow	Oct 17-23	31	5	
Union of South Africa				
Cape Province—				
Alexandria District	Oct 31-Nov. 6			Outbreak. In one locality.

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
French Sudan:				
Segou	Nov 23	1	1	
Senegal				Nov. 23, 1926. Cases, 4, deaths, 4. One European.
Koida District	Nov 23	1	1	
Sine Saloum	do	3	3	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received From June 26 to December 31, 1926[1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				Apr 18-May 29, 1926 Cases, 31; deaths, 29
China				
Amoy	Aug 8-Nov 6	275		
Antung	Aug 1-31	500		
Canton	June 1-30	38	14	
Do	July 15-31	54	28	
Do	Aug 25-31	30	8	
Changsha	Oct 3-16	2		
Foochow	Aug 15-Oct 2		1	In foreign population
Kulangsu	Sept 12-18		2	
Manchuria—				
Changshun	Aug 1-31	320		
Dairen	do	10	1	
Harbin	Aug 5-Sept 12	289	83	
Newchwang	Aug 1-31	167		
Nanking	July 25-Oct 2			Present
Shanghai	Reported July 20	35	8	
Do	July 25-Oct 23	43	420	Cases, foreign, deaths, native and foreign
Swatow	July 11-Oct 16	50	63	
Tsingtao	July 11-Aug 30	4	4	Japanese settlements, 10 deaths; Chinese, 30 to 40 deaths daily, estimated
Do	Oct 10-30			Present
Chosen				
North Heian Province	Sept 3-16	70	30	Deaths estimated
Shungishu	Sept 13	19		Including places in vicinity.
French Settlements in India	Mar 7-June 26	31	30	
Do	June 27-Aug 28	94	83	
India				Apr 25-June 26, 1926. Cases, 18,526; deaths, 11,531 June 27-Oct 9, 1926 Cases, 28,544, deaths, 17,966
Bombay	May 30-June 5	1	1	
Do	July 18-Oct 16	4	4	
Calcutta	Apr 4-May 29	478	418	
Do	June 13-26	73	69	
Do	June 27-Oct 30	366	320	
Madras	May 16-June 5	2	1	
Do	Aug 1-Sept 25	7	6	
Rangoon	May 9-June 26	67	44	
Do	June 27-Nov 6	33	31	
Indo-China				
Saigon	May 2-15	52	48	
Do	May 22-June 26	42	32	
Do	June 27-Aug 14	31	17	
Japan				To Sept 10, 1926 Cases, 35
Ken (Prefecture)—				
Hiroshima	To Sept 10	1		
Hyogo	do	7		
Kagakawa	do	8		
Kanagawa	do	3		Including Yokohama
Kochi	do	1		
Ookayama	do	7		
Osaka	do	6		
Taihoku	Sept 1-10	2		
Wakayama	To Sept 10	2		
Taiwan Island	Sept 21-Oct 10	11		
Persia:				
Teheran	Aug 23-Sept 23	1		
Philippine Islands				
Manila	Dec. 29, 1925-Oct. 30, 1926	27	6	
Provinces—				
Albay	Apr 18-24	1	1	
Davao	May 23-29	1		
Mindoro	Feb. 21-Mar 6	3	3	
Pampanga	July 25-31	1	1	
Rizal	July 18-24	1		
Romblon	Dec 14-31	42	43	
Do	Jan 2-Mar. 27	41	35	
Siam				Apr 1-Oct 30, 1926 Cases, 7,705; deaths, 5,075
Bangkok	May 2-June 12	1,325	736	
Do	June 20-26	56	26	
Do	June 27-Oct 30	99	69	
Straits Settlements:				
Singapore	July 4-17	2	1	
On vessel:				
Steamship Macedonia	Aug. 5	7		At Yokohama, Japan. Vessel sailed from Singapore July 18, 1926.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 31, 1926—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria				
Algiers	June 21-30	1		Under date of July 16, 2 cases reported.
Do	July 1-20	1		
Do	Sept 23	1		
Bona	Aug. 14	1		
Oran	Sept 21-Nov 13	10	5	
Philippeville	Sept 7	1		
Sfax	Nov. 13	7		
Argentina				
Cordoba Province	Nov 20	5		
Azores				
Fayal Island—				
Horta	Aug 2-29	2	2	
St Michaels Island	May 9-June 16	4	1	
Do	June 27-July 10	3	1	
Brazil				
Paranagua	Oct. 8			Present
British East Africa				
Kenya—				
Kisumu	May 16-22	1	1	
Do	Aug 17-Sept 11	3	2	
Uganda	Mar 1-June 30	732	574	
Do	July 1-Aug. 31	312	267	
Canary Islands:				
Las Palmas	Nov 2	3		Stated to be in locality removed from port
Teneriffe	Aug 2	2		
Ceylon				
Colombo	May 29-June 5	1	1	
Do	Oct 31-Nov. 6	1	1	Provisional diagnosis
Chile.				
Iquique	June 20-26		1	
China				
Amoy	Apr 18-June 26	40	30	
Do	June 27-Aug. 7	28		
Foochow	June 6-July 31			Several cases Not epidemic.
Mongolia—				
Sanbese	Dec 18			Epidemic, pneumonic.
Urga	do			Do.
Nanking	May 9-Oct 23			Prevalent
Swatow	July 25-31	14		
Ecuador				January-June, 1926. Cases, 385; deaths, 154.
Chimborazo	January-June	9	2	Rats taken, 766.
Guayaquil	May 16-June 30	6		Rats taken, 30,914; found infected, 31.
Do	July 1-Oct. 31	19	3	Rats taken, 82,774; found infected, 115.
Leon	January-June	43	19	Localities, 2.
Loja	do	176	75	Cantons, 2.
Tungurahua	do	83	29	At Ambato, Huachi, and Picayhua Rats taken, 1,542.
Egypt				Jan. 1-Nov. 18, 1926: Cases, 143.
City—				
Alexandria	July 27-Nov 23	7	1	
Suez	May 21-July 1	9	5	
Do	July 29	2		
Provinces—				
Behera	July 23-Aug 15	4	1	
Beni-Suef	May 23-June 8	8	2	
Charkieh	July 27	1	1	
Gharbieh	June 2	1	1	
Do	Nov. 22-28	2	1	
Minieh	July 24	1	1	
Sidi Barrani	Sept 30-Oct. 21	23	3	In western desert.
Tanta District	Oct 22-Nov 18	3		
France				
Marseille	July 8	1	1	Reported July 24.
Paris	Oct. 18	1		
St Denis	Reported Aug 2	1		Vicinity of Paris
St. Ouen	Aug 14	2		Suburb of Paris.
Great Britain				
Liverpool	Aug 29-Sept. 4	2	1	
Greece:				
Athens	Apr. 1-May 31	16	4	Including Piraeus.
Do	Aug. 1-Sept. 30	20	5	Do.
Patras	May 27-June 12	4	1	
Do	July 25-Nov 13	12	5	
Zante	May 17	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 31, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Hawaii Territory				
Hamakua	June 9			1 plague rodent trapped near Hamakua Mill
Honokaa	Oct 6	1	1	
Paauhau	July 18-24			Plague-infected rat trapped
India				Apr 25-June 16, 1926 Cases, 53,001, deaths, 41,576 June 27-Oct 9, 1926 Cases, 10,028, deaths, 5,660
Bombay	May 2-June 26	16	15	
Do	July 18-Oct 9	13	12	
Karachi	May 23-June 26	15	13	
Do	July 11-17	1	1	
Madras Presidency	Apr 25-June 26	162	93	
Do	July 4-Oct 23	1,159	562	
Rangoon	May 9-June 26	20	15	
Do	June 27-Nov 6	92	81	
Indo-China				
Saigon	May 23-June 26	8	3	
Do	July 18-Aug 7	2	1	
Iraq				
Baghdad	Apr 18-June 12	161	108	
Do	July 18-Sept 11	4	4	
Japan				
Yokohama	July 2-Aug. 10	9	8	
Java				
Batavia	Apr 24-June 19	65	65	
Do	June 26-Nov 6	102	99	
Cheribon	Apr 11-24	3	3	
Do	Sept 12-18	1	1	
East Java and Madura	June 13-19	1	1	
Do	July 25-Oct 16	1	2	
Surabaya	Aug. 22-Sept 25	18	2	
Madagascar				
Ambositra Province	May 1-15	4	4	Septicemic.
Antsirabi Province	June 16-30	4	4	
Itasy Province	do	17	10	
Do	Aug 16-Sept 30	8	8	
Maevatanana Province	Aug 16-Oct 15	19	19	
Majunga Province	June 16-30	10	6	
Do	Aug. 16-Oct 15	72	58	
Mananjary Province	do	1	1	
Moramanga Province	Apr 1-15	2	2	
Do	Sept 1-Oct 15	49	49	
Tamatave Province	Aug 16-Oct. 15	21	16	
Tananarive Province				Apr 1-June 30 1926 Cases, 130, deaths, 120 July 1-Oct 15, 1926 Cases, 276, deaths, 262
Towns—				
Majunga	Aug 1-15	14	10	
Tamatave (port)	May 16-31	1	1	
Do	July 1-Aug 15	6	5	
Tananarive	Apr 1-June 30	7	7	
Do	July 1-Oct 15	48	45	
Mauritius				
Port Louis	July 31	1	1	
Nigeria				Feb 1-June 30, 1926 Cases, 191, deaths, 163 July 1-31, 1926, Cases, 121; deaths, 112
Peru				May-June, 1926 Cases, 57; deaths, 16 July 1-Oct 31, 1926. Cases, 125, deaths, 65
Departments—				
Ancash	May 1-31			Present
Do	July 1-Sept 30	2		
Cajamarca	May 1-June 30	10	4	
Do	Aug 1-Oct 31	1		
Ica	May 1-31	1		
Do	July 1-31	1		
Junin	Sept 1-30	21	20	
Lambayeque	Sept 1-Oct 31	5	2	
Libertad	May 1 31	4		
Do	Sept 1-Oct 31	11	2	
Lima	May 1-June 30	29	12	
Do	July 1-Oct 31	82	40	
Piura	June 1-30	13		
Do	Oct 1-31	2	1	
Russia				Jan 1-Mar. 31, 1926. Cases, 37.
Senegal				Nov 1-30, 1925. Cases, 3, deaths, 2 Mar 1-June 30, 1926: Cases, 342, deaths, 213 Nov. 1-23, 1926. Cases, 57, deaths, 27.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 31, 1926—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Siam				Apr 1-Oct 30, 1926 Cases, 15, deaths, 10
Bangkok	May 23-June 26	2	2	
Do	July 18-24	1	1	
Straits Settlements				
Singapore	May 2-8	1	1	
Do	July 4-17	1	1	
Syria				
Beirut	July 1-Aug 10	2		
Do	Oct 15-20	3		
Tunisia	May 11-June 30	174		
Do	July 1-Aug 20	13		
Do	Reported Nov 27	57		
Kairouan	June 9	3		9 cases 30 miles south of Kairouan
Turkey:				
Constantinople	Aug 1-Sept. 25	7	4	
Union of South Africa				
Cape Province	May 16-22	5	3	
Do	Oct 17-23	4	3	
Calvinia District	June 13-26	12	6	
Do	June 27-Aug 21	3	3	
Colesberg District	Oct 31-Nov 6	1		
Hanover District	Oct 10-16	1	1	Native On farm.
Kimberley District	Oct 17-23	2	2	European.
Williston District	June 13-26	2		
Do	June 27-July 3	1		
Do	Oct 17-30	4	3	
Orange Free State—				
Hoopstad District	Aug 15-21	1		
Protestpan	May 9-22	3	3	
On vessel:				
Steamship Zaria	September, 1926	2	2	At Liver[illegible] Lagos, [illegible] 29 plagu[illegible] on board [illegible]
Steamship Dacia	Nov 17	1		At Haifa, Rumani[illegible]

SMALLPOX

Place	Date	Cases	Deaths	Remarks
Algeria				July 21-S[illegible]
Algiers	May 21-June 30	14		
Do	July 1-Nov 10	4		
Constantine	Nov 24	44		Eastern [illegible]
Arabia:				
Aden	Oct 3-9	1		Imported
Belgium				Sept 1-3[illegible]
Antwerp	Aug 1-7	1	1	
Bolivia				
La Paz	May 1-June 30	14	7	
Do	July 1-Aug 31	16	8	
Brazil				
Bahia	June 20-26	1		
Do	June 27-Oct 30	82	43	
Manaos	Apr 1-30		5	
Para	May 16-June 26	26	25	
Do	June 27-Oct 30	38	27	
Pernambuco	July 11-Oct. 16	236	26	
Porto Alegre	Aug 10-31	2		
Rio de Janeiro	May 2-June 19	132	91	
Do	July 4-Sept. 25	2,534	1,338	
Do	Oct 3-Nov 13	475	300	Jan 1-Oct 16, 1926: Cases, 3,601; deaths, 1,896
Sao Paulo	June 27-Aug 22		5	
Santos	Mar 1-7		1	
British East Africa:				
Mombasa	July 5-11	5	4	
Tanganyika	May 1-31	262	46	
Do	Aug. 29-Sept 18	7		
Uganda	Mar. 1-May 31	3		
Do	Aug. 1-31	1		
British South Africa:				
Northern Rhodesia	May 18-24	17	6	Natives.
Do	June 8-14	5		
Do	Sept 11-Nov. 5	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 31, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Canada				May 30–June 26, 1926: Cases, 70. June 27–Dec. 4, 1926: Cases, 571.
Alberta				May 30–June 12, 1926: Cases, 3. June 27–Dec. 4, 1925: Cases, 92.
Calgary	Sept. 5–Nov. 27	50		
British Columbia—				
Vancouver	Aug. 16–Sept. 12	3		
Manitoba				May 30–June 26, 1926: Cases, 15. June 27–Dec. 4, 1926: Cases, 90.
Winnipeg	June 6–12	5		
Do	July 4–Dec. 11	18		
New Brunswick				Oct. 31–Nov. 6, 1926: 1 case.
Northumberland County	Oct. 11–23	1		
Ontario				May 30–June 26, 1926: Cases, 36. June 27–Dec. 4: Cases, 223.
Fort William	July 25–Aug. 7	2		
Kingston	May 23–June 26	5		
Do	July 11–Nov. 6	3		
Kitchener	Apr. 26–May 29	3	1	
North Bay	May 2–22	5		
Do	July 25–31	2		
Orillia	Apr. 26–May 29	7		
Ottawa	July 18–24	1		
Do	Nov. 28–Dec. 4	1		
Packenham	do	10		
Peterboro	Sept. 1–30	10		
Toronto	July 18–Dec. 11	49		
Waterloo	July 18–24	6		
Saskatchewan				May 30–June 26, 1926: Cases, 16. June 27–Dec. 4: Cases, 165.
	July 4–Sept. 25	3		
				Mar. 14–May 29, 1926: Cases, 44, deaths, 3. Sept. 12–18, 1926: Cases, 2.
	Sept. 19–Oct. 16	7		
	June 6–12	1		
	May 1–June 26	4	8	
	July 4–10	1		
	May 17–June 19	5		
	July 4–18	2		
	May 1–31	4	2	
	Sept. 1–30	1		
	Aug. 8–14	1		
	May 2–Oct. 23			Present.
	May 2–Oct. 30			Do.
	Sept. 12–18	1		
	May 2–June 26	19	10	
	June 27–July 3	1	1	
	July 4–31	18		Railway stations.
	May 16–June 12	5		South Manchurian Railway.
	May 16–June 19	5		
	May 16–June 26	6		Do.
	June 27–Sept. 11	2		Do.
	Apr. 26–June 20	69	16	
	June 28–Aug. 8	5	3	
	May 16–June 5	4		Do.
	May 14–June 30	21		Do.
	July 1–28	12		
...yuan	May 16–June 30	10		Do.
...ngchuling	June 13–19	1		Do.
Liaoyang	May 16–June 30	4		Do.
Mukden	do	4		Do.
Penhsihu	May 16–June 19	4		Do.
Do	Aug. 8–Oct. 3	3		Do.
Ssupinghai	May 16–June 30	2		Do.
Do	Aug. 1–7	1		Do.
Teshihchiao	May 16–June 30	2		Do.
Tieh-ling	Sept. 27–Oct. 3	1		
Wa-feng-tien	do	3		Do.
Do	Aug. 1–7	1		Do.
Nanking	May 8–Oct. 30			Present.
Shanghai	May 2–June 26	10	25	Cases, foreign: Deaths, population of international concession, foreign and native.
Do	June 27–July 24	3	3	
Do	Oct. 3–9	1		
Swatow	May 9–Oct. 30			Sporadic.
Tientsin	June 2–26		1	Reported by British municipality.
Wanshien	May [illegible]			Prevalent.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 31, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Chosen				Mar 1-June 30, 1926 Cases, 667; deaths, 146 July 1-31, 1926. Cases, 82, deaths, 27
Fusan	May 1-31	1		
Seishun	do	2	1	
Egypt				
Alexandria	May 15-July 1	18	3	
Do	July 23-Oct 28	15	7	
Cairo	Jan 29-June 10	56	14	
Estonia				May 1-June 30, 1926 Cases, 3.
France				Mar 1-June 30 1926 Cases, 141. July 1-Aug 31 Cases, 24.
Paris	Sept 1-Nov. 20	69	19	
St Etienne	Apr 18-June 15	7	3	
Do	Sept 16-30	2	1	
French Settlements in India	Mar 7-June 26	282	252	
Do	June 27-Aug 28	65	68	
Germany				
Coblenz	Oct 24-30	1		
Gold Coast	Mar 1-June 30	671		
Do	July 1-31	20	1	
Great Britain				
England and Wales				May 23-June 26, 1926 Cases, 933; June 27-Nov 13, 1926 Cases, 2,415
Birmingham	Sept. 26-Oct 2	1		
Bradford	May 23-29	1		
Do	Aug 29-Sept 4	1		
Hull	Oct 17-23	1		
London	Sept 26-Oct 23	4		
Newcastle-on-Tyne	June 6-12	1		
Do	July 11-Nov 30	7		At Gateshead, several cases reported
Nottingham	May 2-June 5	7		
Do	July 18-24	1		
Sheffield	June 13-19	1		
Do	July 4-Nov 27	49		
South Shields	Oct 3-9	1		
Stoke-on-Trent	Nov 7-13	1		
Greece				
[illegible]ens	July 1-31	71	6	Including Piræus
Saloniki	June 1-14		3	
Guatemala				
Guatemala City	June 1-30		2	
India				Apr. 25-June [illegible] 54,851; deaths 19[illegible] Oct. 9, [illegible]ps. deaths, 8,44[illegible] troo[illegible] in [illegible]
Bombay	May 2-June 26	220	134	
Do	June 27-Nov. 6	137	75	
Calcutta	Apr. 4-May 20	171	152	
Do	June 13-26	24	18	
Do	June 27-Oct 30	53	47	
Karachi	May 6-June 26	44	18	
Do	June 27-Oct 30	15	7	
Madras	May 16-June 26	7	4	
Do	June 27-Nov 13	83	21	
Rangoon	May 9-June 26	10	5	
Do	July 4-Sept 23	21	5	
Indo-China				
Saigon	May 9-June 26	2		
Iraq				
Baghdad	do	8	3	
Do	July 4-Sept 11	3	1	
Basra	Apr 18-June 22	34	25	
Do	Aug 15-21	1		
Italy				Ma[illegible]
Catania	Aug 9-15	2		Ju[illegible]
Rome	June 14-20	4		E[illegible]
Do	Aug 30-Sept 5	2		
Jamaica				
Do				1-31, [illegible]
Japan				Including [illegible]
Kobe	May 30-June 5	1		
Nagoya	May 16-June 22			
Do	July 4-10	1		
Taiwan Island	May 11-20	24		
Do	June 1-20	23		
Do	July 11-Aug 10	2		
Tokyo	June 26-July 17	3		
Yokohama	May 2-8	2		

CHOLERA, PLAGUE, SMALLPOX, ... FEVER—Co...

Reports Received from June 26 to Decem...

SMALLPOX—Continued

Place	Date	Cases	Deaths	
Java:				
Batavia	May 15-June 25	2		Province
Do	July 24-Nov 6	22		
East Java and Madura	Apr 11-July 3	100	6	
Do	July 4-Oct. 23	79	6	
Malang	Apr 4-10	6	1	Interior
Surabaya	May 16-22	14	1	
Do	July 18-Sept 25	143	8	
Latvia				Apr 1-June 30, 1926 Cases, 5
Mexico				Feb 1-June 30, 1926. Deaths, 1,525
Aguascalientes	June 13-26		5	
Ciudad Jaurez	Dec 7-13	1		
Guadalajara	June 8-14		2	
Do	June 29-Sept 27		8	
Mexico City	May 16-June 5	3		Including municipalities in Federal district
Do	July 25-Dec 4	9		Do
Saltillo	July 18-24		1	
San Antonio de Arenales	Jan 1-June 30			Present 100 miles from Chihuahua.
San Luis Potosi	June 13-26		7	
Do	July 1-Dec. 4		30	
Torreon	May 1-June 30		17	
Do	July 1-Nov 27		17	
Netherlands				
Amsterdam	July 18-24		9	
Nigeria				Feb 1-June 30, 1926 Cases, 521, deaths, 49
Persia:				
Teheran	Apr 21-Sept 23		18	
Arequipa	June 1-30		1	
Do	Sept 1-Oct. 31			Present.
				Mar 28-May 1, 1926 Cases, 12; deaths, 1 June 27-Oct 9, 1926. Cases, 117, deaths, 1
	Apr. 26-June 19	10	3	
	July 11-Nov 27	46	7	
	May 23-June 5	4		
	July 11-Nov. 6	3	1	
				Jan 1-Apr 30, 1926 Cases, 2,529
				Apr. 1-Oct. 30, 1926 Cases, 628, deaths, 251.
	May 2-June 12	23	20	
	July 4-Oct 30	87	68	
				Jan. 1-June 30, 1926: Deaths, 9
	Aug 22-Oct. 23	3		
	Apr 25-May 1	1		
	July 11-17	1		
	Aug. 22-28			1 case varioloid
	June 1-30	1		
	July 1-Sept 30	3		
	Apr 1-June 30	12		
				Apr. 1-June 30, 1926 Cases, 17. July 1-Sept. 30, 1926 Cases, 38.
	Sept 11-30	2		
	June 1-30	8	1	
	June 20-26			Outbreaks.
	Aug. 15-Oct. 30			Do.
	May 23-29			Do
	May 30-June 5			Do
	Oct 10-Nov. 6	50	10	
	Oct 31-Nov 6			Outbreak. In Nkandhla district
	June 20-Aug 28			Outbreak
				June 6-12, 1926 Outbreaks in Pietersburg and Rustenburg districts.
	...e 29-Sept. 4	1		Native...

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 31, 1926—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Chosen				At Zanzibar, June 7, 1926 1 case of smallpox landed At Durban, Union of South Africa, June 16, 1926 1 suspect case landed
Fusan				
Seishun.				
Egypt				
Alex				
ship	July 2	1		Vessel from Glasgow, Scotland, for Canada. Patient from Glasgow, removed at quarantine on outward voyage.

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria				July 21-Sept 20, 1926 Cases, 31; deaths, 1
Algiers	May 21-June 30	7	1	
Do	July 21-Aug 31	3		
Argentina				
Rosario	Feb 1, 28	2		
Bolivia.				
La Paz	June 1-30		1	
Do	Aug. 1-31	9	1	
Bulgaria				Mar 1-June 30, 1926. Cases, 87; deaths, 14.
Chile				
Antofagasta	May 23-June 26	4		
Do	June 27-July 3	1		
Concepcion	June 1-7		1	
Do	Oct. 1-31			Stated to be present in gaol.
Iquique	Aug 8-Oct 16	1	2	
Valparaiso	*Apr 29-May 5*		*1*	
Do	Aug 14-Nov. 6	11		
China				
Antung	June 14-27	7	1	
Do	June 28-Oct 31	45	1	
Canton	May 1-31	1		
Chungking	Aug. 29-Sept 4			Present
Ichang			1	Reported May 1, 1926. Occurring among troops.
Manchuria—				
Harbin	Oct 14-20	1		
Wanshien				Present among troops May 1, 1926 Locality in Chungking consular district
Chosen				Feb 1-June 30, 1926 Cases, 1,005; deaths, 112 July 1-31, 1926 Cases, 37, deaths, 6.
Chemulpo	May 1-June 30	38		
Do	July 1-31	7	2	
Gensan	June 1-30	1		
Seoul	do	8	3	
Do	July 1-Oct 31	9		
Czechoslovakia				Jan. 1-June 30, 1926 Cases, 156; deaths, 6.
Egypt				
Alexandria	July 16-Aug 19	3		
Do	Oct 1-7	1	1	
Cairo	Jan 29-May 13	89	27	
Do	July 23-Aug 5	1		
Port Said	June 4-24	4	1	
Do	July 9-Oct 7	5	1	
France	Aug 1-31	5		
Great Britain				
Scotland—				
Glasgow	July 30-Aug 21	9	1	
Do	Reported Dec. 10	8		
Greece				Oct 1-31, 1926 Cases, 7, deaths, 1
Athens	Sept 1-30		17	Including Piraeus.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

Reports Received from June 26 to December 31, 1926—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Italy				Mar. 28–May
Palermo	Sept 12–18	1		
Japan				Mar. 28–May 29,
Latvia				May 1–June 30, 1926 Aug 1–31, 1926 Cases,
Lithuania				Mar 1–June 30, 1926 Cas deaths, 22 July 1–Au 1926 Cases, 23.
Mexico				Feb 1–June 30, 1926 De
Durango	July 1–31		1	
Mexico City	May 16–June 5	20		Including municipaliti eral District.
Do	June 13–19	9		Do
Do	July 25–31	3		Do
Do	Aug 15–Dec 4	99		Do
San Luis Potosi	June 13 26			Present, city and country
Morocco				Mar 1–June 30, 1926: Cases, 42 July 1–Aug 31, 1926. Cases, 2
Norway				
Stavanger	Sept. 6–12	1		
Palestine				Mar. 1–June 30, 1926: Cases, 1 deaths, 1. Aug. 1–Oct. 2 1926 Cases, 22.
Birtuvia	Oct. 31–Nov. 6	1		
Gaza	July 6–12	1		
Haifa	July 13–Nov. 15	6		
Hainlal	Aug. 17–23	1		
Jaffa district	June 15–28	5		
Do	Sept 28–Nov. 8	4		
Jerusalem	Sept 14–27	2		
Majdal district	July 13–Aug. 2	2		
Nazareth district	July 13–Nov. 8	7		
Petah Tokvah	Oct. 5–11	3		
Tiberias	Aug. 3–9	1		
Yavneil	Aug 17–23	1		
Persia:				
Teheran	May 23–June 22		1	
Do	July 24–Sept. 23		5	
Peru:				
Arequipa	Jan 1–31		2	
Lima	Aug. 1–31	1		
Poland				Mar 28–June 26, 1926. Ca 1,272, deaths, 85. June 27–(16, 1926 Cases, 346, deaths
Krakow	Oct 17–23	31	5	
Tarnopol district	Oct. 10–16	1	1	
Rumania				Mar 1–June 30, 1926 Cas deaths, 83 July 1– Cases, 65, deaths, 9
Russia				Jan 1–Apr 30, 1926 18,647
Spain	Jan 1–June 30		13	
Tunisia				Apr. 1–June 30, 1926: Cases, July 1–Sept. 20, 1926 Cases,
Tunis	June 11–30	3		
Turkey:				
Constantinople	June 16–22	1		
Union of South Africa				Apr. 1–May 31, 1926. Cases, deaths, 19
Do				July 1–31, 1926: Cases, 90, deat 17
Cape Province				Apr. 1–June 30, 1926: Cases, deaths, 24, native July Sept 30, 1926: Cases, deaths, 17
Alexandria District	Oct 31–Nov. 6			Outbreak in one locality.
Clydesdale	Oct. 17–23			Outbreaks
Elliot District	Oct. 24–30	1		
Glengray district	June 27–July 3			Do.
Grahamstown	do	1		
Natal				

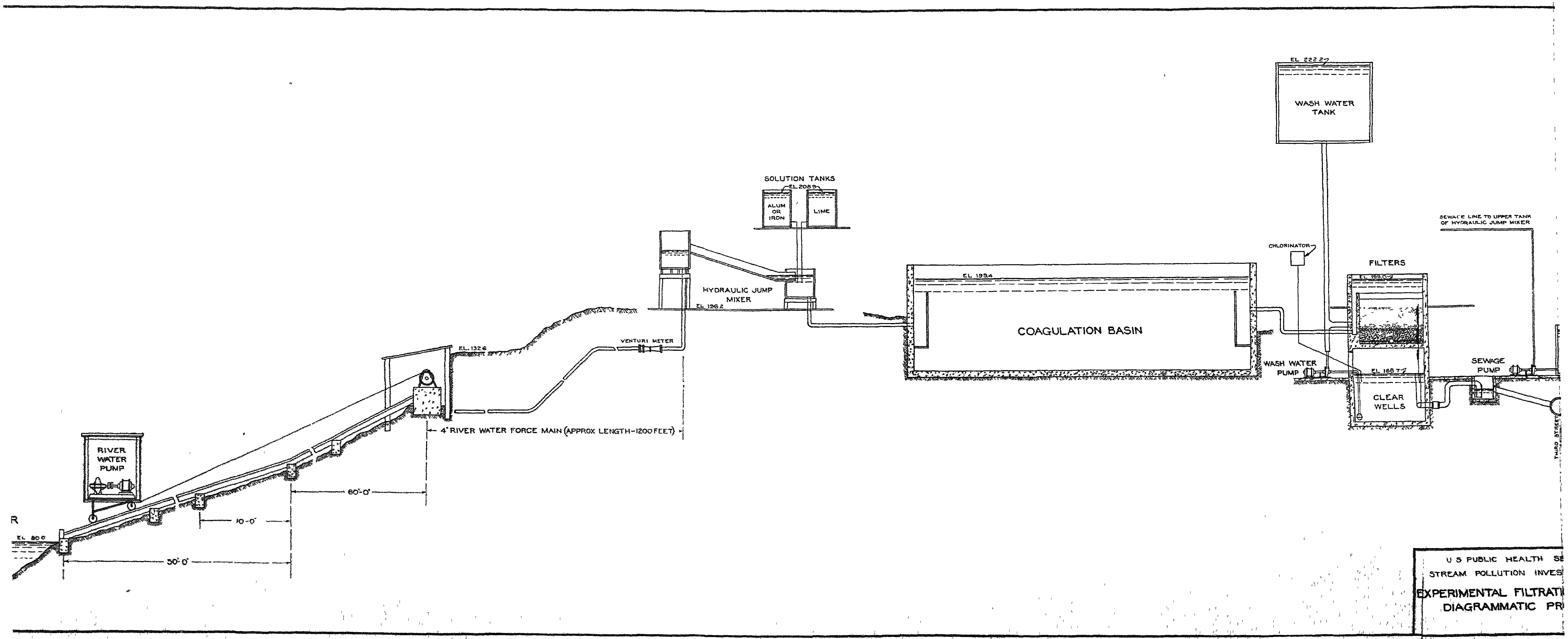

Fig. 2

9273b—26. (Face p. 2